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ABSTRACT

In support of the National Education Goals of 1990, the Goals Panel convened a Technical Planning Group to offer background guidance for the National Council on Education and Standards in its task of establishing world-class academic standards for the United States. Recommendations of the Planning Group consider two types of content standards: national subject-specific content standards and state content standards. The Group recommends that certification of content standards be provisional until associated performance standards are developed. Review criteria for content standards include ensuring that they are: (1) of world-class standards; (2) important and focused; (3) useful; (4) reflective of broad consensus building; (5) balanced; (6) accurate and sound; (7) clear and usable; (8) assessable; (9) adaptable; and (10) developmentally appropriate. State content standards should be as rigorous as national subject-specific standards, feasible, cumulatively adequate for student needs, encouraging of the ability to integrate and apply knowledge, and reflective of broad consensus. While all that is needed to develop high standards is not yet known, high standards themselves are a critical first step. Five appendices contain supplemental information about the Planning Group, background documents about standard setting in other countries, and initial efforts in the United States. (SLD)

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ED 366 613

NATIONAL EDUCATION GOALS PANEL

PROMISES TO KEEP: CREATING HIGH STANDARDS FOR AMERICAN STUDENTS

Report to the National Education Goals Panel

GOALS 3 AND 4 TECHNICAL PLANNING GROUP
ON THE REVIEW OF EDUCATION STANDARDS

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
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PROMISES TO KEEP:

CREATING HIGH STANDARDS FOR AMERICAN STUDENTS

Report on the Review of Education Standards
from the Goals 3 and 4 Technical Planning Group

to the **National Education Goals Panel**

November 1993

November 15, 1993

Letter to the National Education Goals Panel:

Last May you convened the Goals 3 and 4 Standards Review Technical Planning Group and asked us do some initial thinking for and with the Goals Panel. Our charge was to prepare a report offering recommendations for "criteria and processes the National Education Goals Panel and a National Education Standards and Improvement Council (NESIC) should use to review and certify voluntary national content standards as 'world- class,' 'high-quality,' and 'internationally competitive' as envisioned by the Goals Panel, the report *Raising Standards for American Education*, and legislation considered by the Congress."

Since May we met eight times and talked with members of the Panel directly at its June and July meetings about the nature and progress of our work. We have tried to uncover and illuminate some of the complex issues that efforts to review and certify education standards will face, and to offer you our best thinking on those topics.

We submit this report with renewed respect for the importance of the questions you asked us to address, and with increased appreciation for the difficulty of the job which lies ahead. The recommendations in the body of this report are positions upon which the group agreed. Individual member comments from David Hornbeck and Shirley Malcom are presented in Section V.

Sincerely,

Shirley M. Malcom

Shirley Malcom, Chair
Goals 3 and 4 Standards Review Technical Planning Group

for Iris Carl, Thomas Crawford, Mihaly Csikszentmihalyi, Philip Daro, Chester Finn, Anne Heald, David Hornbeck, David Kearns, Richard Mills, Harold Noah, Claire Pelton, James Renier, Sidney Smith, and James Wilsford

This report to the National Education Goals Panel
on behalf of the Goals 3 and 4 Technical Planning Group
was prepared by Emily Wurtz with Shirley Malcom
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PROMISES TO KEEP:
CREATING HIGH STANDARDS FOR AMERICAN STUDENTS

EXECUTIVE SUMMARY

Education is the cornerstone of democracy and the avenue to equal opportunity for all. For the most part, the American education system has succeeded in preparing generations of students from diverse backgrounds for a place in American society. Where it did not, the economy had a place for people who were willing to work hard even without the skills of formal schooling. In this process, expectations varied from school to school and student to student, but the job got done.

But the job has changed. The demands of today's society are different. We need graduates who can compete in the global economy. We need adults who can use the knowledge and skills they acquire in school to deal with the complex issues of their own communities and of the world.

To fulfill the old promise of American education — that all graduates will be prepared to take their place in society — requires a new promise — that all students will be held to high academic standards.

BACKGROUND

Educational renewal received support at the highest levels of government when the President and the nation's Governors met at an historic Education Summit in 1989. They announced six National Education Goals in early 1990, and established a National Education Goals Panel to measure progress towards those goals in 1991.

Two of those goals focus on improving student achievement in challenging subject matter. Yet beyond basic skills there is no consensus on what knowledge, skills, and understandings are worthy of being taught and measured. In 1991 Congress and the National Education Goals Panel created the National Council on Education Standards and Testing to consider establishing world-class academic standards in the United States.

The Council's report *Raising Standards for American Education* found that standards were desirable and feasible and recommended establishing a new body to encourage and, with the Goals Panel, approve nationwide education standards. In April 1993, the Clinton Administration submitted legislation, now under consideration by Congress, that provides for such a body, the National Education Standards and Improvement Council (NESIC).

Anticipating creation of such a council, the Goals Panel convened a Technical Planning Group to offer background guidance for the council's consideration. The Group developed this report to indicate practical initial steps for reviewing and certifying the education standards currently being developed by independent professional organizations. Chaired by Shirley Malcom, the group included Iris Carl, Thomas Crawford, Mihaly Csikszentmihalyi, Philip Daro, Chester Finn, Anne Heald, David Hornbeck, David Kearns, Richard Mills, Harold Noah, Claire Pelton, James Renier, Sidney Smith, and James Wilsford.

They met eight times between May and September 1993, and conducted outreach that included an extended conversation with leaders of current standards-setting projects, a call for public testimony, and a public forum in St. Paul, Minnesota. The Group emerged with increased appreciation for the complexity of the task and the work that lies ahead.

RECOMMENDATIONS

The following recommendations are offered as a starting place and common point of reference for those who will review and certify education standards. The recommendations reflect a vision of how education standards might be certified in ways that encourage their adoption and use.

The recommendations suggest criteria and processes for reviewing two kinds of education standards: content and performance standards.

Content Standards

Content standards specify "what students should know and be able to do." They indicate the knowledge and skills — the ways of thinking, working, communicating, reasoning, and investigating and the most important and enduring ideas, concepts, issues, dilemmas, and knowledge essential to the discipline — that should be taught and learned in school. They help develop the work and learning habits essential to success in the world outside school: studying well, thinking logically, drawing inferences, supporting assertions with evidence, and applying what is known to a new situation. Central to the purposes of schooling, these habits enable students to apply the knowledge and skills they learn in school to problems of the real world.

The Technical Planning Group considered two types of content standards that would be reviewed and certified: national subject-specific content standards and state content standards.

Subject-specific content standards. Content standards are being (or have been) developed by professional organizations of teachers and scholars in English, mathematics, science, history, geography, foreign languages, citizenship/civics, the arts, and other subjects. The Technical Planning Group recommends that NESIC review and give written feedback on standards to any nationally recognized group that has developed standards and requested their review, but certify subject standards only in the eight subjects listed above. Only a limited set of the knowledge and skills most important for students to learn in the discipline would be proposed in a core content document, accompanied by illustrative teaching and assessment examples. Those proposing the standards would explain, in a case statement, how the standards meet the review criteria. Only one set of content standards would be certified in each subject area.

State content standards. States would need to integrate proposed standards into a feasible but adequate set for the state. State content standards would need to fit together to define the core knowledge and skills for schools to teach and students to learn within the state. The Technical Planning Group recommends that each state propose a set of meaningful standards, typically a subset of the eight NESIC-certified subject-specific standards. States would not be required, but, to allow latitude for local and school curriculum development, may be cautioned to limit their core set of state standards to something less than the entire school day, year, or program.

In reviewing subject-specific content standards, NESIC should take a broad view, considering whether cumulatively they fit together and identifying overlap, connections, and collective significance of the standards from different disciplines. NESIC should work with the professional organizations developing these standards to encourage that these issues be addressed early in the process and consistently thereafter. NESIC should similarly work with states to help them develop state standards that effectively integrate subject-specific content standards and are feasible to implement.

Performance standards

Performance standards specify "how good is good enough." They relate to issues of assessment that gauge the degree to which content standards have been attained. While others use the term differently, in this report "performance standards" are not the skills, modes of reasoning, and habits mentioned above that assessments attempt to measure. Instead, they are the indices of quality that specify how adept or competent a student demonstration must be. A performance standard indicates both the nature of the evidence (such as an essay, mathematical proof, scientific experiment, project, exam, or combination of these) required to demonstrate that the content standard has been met and the quality of student performance that will be deemed acceptable (that merits a passing or "A" grade). The Technical Planning Group believes that performance standards are essential to gauging whether content standards are met.

Therefore, the Technical Planning Group recommends that certification of content standards be provisional until associated performance standards are developed. Content standards themselves should include guidance on the nature of the evidence that is required to judge whether they have been met, and they should offer examples of possible assessment activities that would enable further assessment development. Over time judgments of the quality of student performances should entail regular collection and public review and reporting of samples of actual student work.

Review Criteria for Content Standards

For subject-specific standards to be judged worthy of certification, the Technical Planning Group suggests that the public be assured that the standards are:

World Class, at least as challenging as current standards in other leading industrial countries, though not necessarily the same;

Important and Focused, parsimonious while including those elements that represent the most important knowledge and skills within a discipline;

Useful, developing what is needed for citizenship, employment, and life-long learning;

Reflective of Broad Consensus-Building, resulting from an iterative process of comment, feedback, and revision including educators and the lay public;

Balanced, between the competing requirements for:

- depth and breadth;
- being definite/specific & being flexible/adaptable;
- theory or principles & facts or information;
- formal knowledge & applications;
- being forward-looking & traditional;

Accurate and Sound, reflecting the best scholarship within the discipline;

Clear and Usable, sufficiently clear so that parents, teachers, and students can understand what the standards mean and what the standards require of them;

Assessable, sufficiently specific so their attainment can be measured in terms meaningful to teachers, students, parents, test makers and users, the public, and others;

Adaptable, permitting flexibility in implementation needed for local control, state and regional variation, and differing individual interests and cultural traditions;

Developmentally Appropriate, challenging but, with sustained effort, attainable by all students at elementary, middle, and high school levels.

State content standards. States would be asked to specify a "core" of standards that they require of all students. These state standards would be reviewed as a set to determine if, taken together, they are:

As rigorous as national subject-specific standards, and when different, subject to the same review criteria.

Feasible, sufficiently delimited and focused so they could be implemented.

Cumulatively adequate to give all students the knowledge, skills, and habits needed to succeed in work and further learning.

Encouraging of students' ability to integrate and apply knowledge and skills from various subjects.

Reflective of broad state consensus-building, resulting from an iterative process of comment, feedback, and revision among educators and the public within the state.

CONCLUSION

For the United States to retain international leadership, its education system must develop and implement education standards at internationally competitive levels for its entire student population.

This represents a new way of thinking — a paradigm shift — about American students. The expectation is that students in every school should be able to reach these standards with adequate support and sustained effort.

While keenly aware of the social problems weighing heavily and unevenly on schools, the Technical Planning Group agreed that inequities in current social realities could not be used as a justification for low expectations. High standards for all students were seen as the promise of American education, a promise that the Technical Planning Group wants to help the nation keep. Keeping this promise, however, will require the commitment not only of our schools, but of the broader community as well. This will require a collaborative effort of students, parents, teachers, administrators, government officials, and every member of the community.

Not all students will meet these standards rapidly. However, the standards are meant to define realistic high goals. The standards would apply directly to all students except those, such as the severely mentally retarded, whose individual diagnosis implies a judgment that the student cannot meet them. However, these students, as well, deserve clearly defined higher standards.

To reach the standards will entail a renewal of all aspects of the education system. It will be a long process, requiring time, intelligence, wisdom, sustained effort, and collective commitment. Raising our educational performance is a long-term, systemic effort that will take decades. The standards should be clear and visible. They should be reinforced by curricula, teacher training, instructional materials, and assessment practices that enable students to meet them and to compete successfully with students of any country in the world.

It is critically important that a core set of standards be defined that makes sense when communicated to the public and to teachers, students, and school systems. Both NESIC and the states have the responsibility to see that these standards make sense together. Cumulatively, the standards must be feasible to implement within the daily and long-term operation of schools, and they should be adequate to achieve the purposes of school and the promise of American education.

Our schools and our country need high standards against which to measure their success. Raising our educational performance is a long-term, systemic effort that will take decades. We do not know all that must be done to reach high standards, but we do know that high standards themselves are a critical first step. We hope this report helps the nation keep the promise of high standards for American students.

PROMISES TO KEEP:
CREATING HIGH STANDARDS FOR AMERICAN STUDENTS

I. INTRODUCTION

The Need for Standards

"World-class athlete" — the phrase conjures up images of young men and women meeting the highest standards of athletic excellence, as they compete with youth of other countries. We picture American athletes earning Olympic medals or setting new world records. And we picture athletes in every home town in America striving toward those world-class standards, pushing themselves to excel, and improving their personal performances as they put forth effort.

But do we have a similar vision academically? Unfortunately, we do not. We have standards setting the pace in sports but not in academics. We have no visible image of what academic success should look like, for which every student should work. Instead we have vague expectations that vary from school to school and from child to child. And our expectations for the vast majority of children have been far too low.

The result is that our students are nowhere near a world-class level. Business leaders express concern about the future of our work force in a highly competitive global economy. University officials find applicants lacking in the skills and competencies needed to undertake a rigorous program of study. The very fabric of our democracy may be at stake if our schools turn out graduates unprepared to participate in their communities and to make educated, well-informed choices.

It is time to set our sights as high academically as we do athletically. We need to set world-class academic standards. They must be visible and reflected in curricula, instructional materials, teacher training, and assessment practices that enable our students to meet them and compete successfully with students of any country in the world. Not only should the top 5% of our students be as good as or better than the top 5% of students anywhere in the world, but the top 95% of our students should be as good as or better than the top 95% of students anywhere else. We must raise the expectations for every student in every school in the United States.

Meeting these standards will not be easy. However, the standards are meant to define what students should aim for and, with sustained effort, be able to reach. It is a purpose that requires the commitment and effort of students, parents, teachers, administrators, government officials and members of the community. Schools need help. The purpose requires that we all accept responsibility for seeing that all our students reach a world-class level. We don't want to fool ourselves into thinking we have succeeded because our standards are set at low levels. As our National Education Goals state, we want students to succeed in challenging subject matter. Otherwise, America will remain a "nation at risk."

To overcome this risk, the nation must take the long view. Mechanisms for establishing standards, while under way, are far from complete. Initial results may be uneven, but progress will take place. The success of some states and communities will add credibility to the efforts of others. If the standards attained are high enough and the efforts to reach them are serious enough, the next generation will look at these efforts as a major turning point. To help this important process, the National Education Goals Panel asked a group of advisors to recommend some practical initial steps for reviewing and certifying education standards currently being developed. This report is part of a continuing national conversation about creating internationally competitive education standards for America. It is intended to bring focus and concreteness to those discussions.

This report points to the complexities of certifying standards, often by making specific technical recommendations. It tries to indicate a vision of how education standards might be certified in ways that encourage their adoption and use. It is intended to offer a starting point and common vocabulary for the National Education Goals Panel, the National Education Standards and Improvement Council, states, professional organizations, citizens, and policymakers now developing standards.

II. BACKGROUND

The Promise: Standards and Reform

Education is the cornerstone of democracy and the avenue to equal opportunity for all.

Education benefits both the individual and the society. Citizens must be able to participate in the work force and in their communities to lead rich lives. Society depends upon its members to have the knowledge and skills necessary to compete in a global economy, exercise the rights and responsibilities of citizenship, and use their minds well.

Today, new demands are being made of America's education system. That system met the challenges of the past. It prepared generations of diverse newcomers to take their place in American society. In this process, expectations have varied from school to school and student to student, but the job got done. Now the job has changed. Reality does not match the promise to help all students learn what they need to know.

We all bear the burden of the uneven educational system that has evolved. Leaders in business and industry fear that the majority of American students are not prepared to compete in the global economy. Colleges and universities find that many are unprepared for rigorous study. Too few adults can meet the requirements of participatory democracy and workplace literacy. And sadly, they often do not know that this is so.

To fulfill the old promise of American education — that students will be prepared to take their place in society — requires a new level of performance for the system, and a new level of effort at reform. The call for educational reform is not new, but the need to hold all students to high standards is.

Standards-driven reform seeks to establish clear, attainable standards at internationally competitive levels for the entire national student population. This represents a new way of thinking — a paradigm shift — about American students. It raises our expectations for every student in every school, not just some students in some schools. The goal of this reform is to clarify and put in place a new set of expectations for American students at world-class levels.

Setting the standards is only the first step of many that are needed to achieve them. To make this happen will require systemic reform. The challenge is daunting — some fear, overwhelming — but the necessity is real.

Although the need for standards-driven reform is national, it must be implemented — and indeed invented — on the local level. Students and communities differ in their needs and resources. States and communities will determine the best route for providing necessary assistance to schools; they will write their own roadmaps for achieving the standards. The roadmaps should enable any student who works hard to meet the standards and any student who meets the standards to be well prepared for his or her future.

It is essential that communities do more than lay out priorities. They must assist their schools with adequate resources, necessary support, and appropriate policies. Teachers cannot bear the burden alone. Determining both the standards and the means to reach them demands unprecedented action from alliances of students, parents, teachers, administrators, community members, policymakers and government officials.

A teacher at the public forum held in Minnesota on September 7 wrote to the Goals Panel:

> *I'm feeling like the miller's daughter in the story Rumpelstiltskin. "You" national education leaders and administrators promise the public that we teachers can spin straw into gold.... Everyone seems to have a right to achieve the highest standard ... and no responsibility for making the sacrifice of significant participation in the process. Help! Help! Help!*

She's right. She cannot do it alone. Her students cannot do it alone. Her principal cannot do it alone. Parents cannot do it alone. They all need help. We can only do it together. Schools must have the support of their communities. High standards indicate to schools the job that the nation needs them to do. Doing the job requires trust and action from new coalitions within every community.

This type of powerful, system-wide change will not happen overnight, and its success cannot be measured in the short term. Meaningful standards must be developed and understood in each discipline and by each community. Curricula need to be developed, tested, and refined in a wide variety of communities facing a wide variety of conditions. Teachers need to be trained to meet the challenges presented to them. Textbooks and teaching materials will have to be developed, and a range of new assessments will need to be invented, all based on these standards. Public involvement needs to be pervasive. People must be helped to understand what the standards are, what they require, and what it means to reach them. These steps need to be taken now.

History

Recognizing the nation's stake in education, the President and the nation's Governors met at an historic Education Summit in Charlottesville in 1989 and resolved together to set National Education Goals. They announced six Goals in early 1990, and committed themselves to a decade of sustained effort of work to achieve them.

Two of the Goals focused on improving the knowledge and skills of students:

Goal 3: **Student Achievement and Citizenship**

> *By the year 2000, American students will leave grades four, eight, and twelve having demonstrated competency in challenging subject matter, including English, mathematics, science, history, and geography; and every school in America will ensure that all students learn to use their minds well, so they may be prepared for responsible citizenship, further learning, and productive employment in our modern economy.*

and

Goal 4: **Science and Mathematics**

> *By the year 2000, U.S. students will be first in the world in science and mathematics achievement.*

To hold themselves as public officials accountable for work to meet those Goals, the President and Governors established a National Education Goals Panel to measure the progress made by states and the nation towards the Goals. The Goals Panel asked national experts, among the best minds in America, what information currently existed to measure such progress. Where existing information was inadequate, the Panel asked what new information would be needed.

The Goals Panel and its advisors recognized that there was no national consensus on what constituted the most important ideas and skills for students to learn, against which to measure progress towards Goals 3 and 4. The Goals Panel embraced a proposal to develop national education standards that specify what students should know and be able to do and to encourage new methods of assessing students' success in meeting them.

The Congress of the United States in June of 1991 created a National Council on Education Standards and Testing (NCEST). Congress charged the Council to advise it on the desirability and feasibility of establishing world class education standards for the United States and methods to assess their attainment. They were also to recommend a long-term mechanism for establishing standards.

The Council met between June and December 1991 and issued its report, *Raising Standards for American Education*, in January 1992. (See Appendix D for the executive summary of this report.) The report found that standards are desirable and feasible and recommended establishing a new body to encourage and, with the Goals Panel, approve nationwide education standards. The Council found that such standards were needed to provide more equitable educational opportunity for all Americans, to enhance the civic culture, and to increase the competitiveness of the economy. It called for high, voluntary national standards to serve as guides and resources for state standards and local reform efforts. In April 1993, the Clinton Administration submitted legislation to the Congress that provided for a National Education Standards and Improvement Council (NESIC). That legislation is now under consideration.

Both the legislation and the report call upon the new council to review and certify "content" standards (indicating what students should know and be able to do) and student "performance" standards (indicating "how good is good enough"). (See pp. 9 and 22 and Appendix D for more on these definitions.) Two kinds of "content standards" are being developed that NESIC may be asked to review: subject-specific national content standards, and state content standards. Subject-specific content standards are being developed, not by the federal government, but by professional organizations of teachers and scholars. The National Council of Teachers of Mathematics (NCTM) worked in the late 1980's with private funds and developed content standards for mathematics. Its report *Curriculum and Evaluation Standards for School Mathematics* has been highly regarded and generally used as a model for professional organizations in other disciplines to follow.

To enable the development of similar sets of standards in other subjects, federal agencies (the U.S. Department of Education, the National Endowment for the Humanities, and the National Science Foundation) awarded grants to other professional associations for the development of standards in science, English, history, geography, civics, fine arts, and foreign languages (see Appendix B). In addition, professional groups in economics and social studies are currently developing such standards with private funds.

A number of activities are also under way at the state level. A number of states are working to identify state education standards and some are identifying a common core of knowledge and skills or desired outcomes for their states' educational systems.

The National Council for Education Standards and Testing recommended that a coordinating structure be put in place to advance standards-setting and assessment development. It agreed that such a structure could play several significant functions, including the establishment of "guidelines for standards-setting and assessment development and general criteria to determine the appropriateness of standards and assessments recommended."

Anticipating the creation of such a council, the Goals Panel convened a Technical Planning Group to advise it regarding the criteria and procedures by which education standards might be reviewed and certified. The group headed by Shirley Malcom, included Iris Carl, Thomas Crawford, Mihaly Csikszentmihalyi, Philip Daro, Chester Finn, Anne Heald, David Hornbeck, David Kearns, Richard Mills, Harold Noah, Claire Pelton, James Renier, Sidney Smith, and James Wilsford. (For biographic information, see Appendix A.)

Charge to the Technical Planning Group

The National Education Goals Panel charged the Technical Planning Group with the following task:

> **Prepare a report by October 1993 recommending the criteria and processes the National Education Goals Panel and a National Education Standards and Improvement Council (NESIC) should use to review and certify voluntary national content standards as "world class," "high-quality," and "internationally competitive" as envisioned by the Goals Panel, the report *Raising Standards for American Education*, and legislation considered by the Congress.**

The Group was further charged to address the following questions in its report:

- How can proposed standards be judged to be "world-class" and "internationally competitive"?
- What are the implications of national content standards (of what students should know and be able to do) for determining student performance standards (of how good is good enough) and student assessments?
- In what subject areas (besides those named in the Goals, i.e., English, mathematics, science, history, and geography) should voluntary national content standards be certified?
- Should more than one national set of standards be reviewed and certified in any one subject area?

Additional important topics and questions arose in subsequent meetings of the Group and of the chair with the Goals Panel. Four of these questions directly influenced the Group's thinking about the review of content standards and are addressed in the body of the report. They are:

- How can subject-based education standards teach students to solve important real-world problems that require integrating knowledge and skills from several disciplines?
- In what sequence should proposed subject disciplines standards be reviewed? Should it be first come, first serve? If not, in what order should the standards be considered, and what is the rationale for that order?
- How should the subject standards fit together? Should any guidance be offered on selecting and integrating use of the standards? If so, by whom: states, local districts, individual schools and teachers, professional associations, or NESIC? If the combined disciplines propose standards that cannot be accommodated within the confines of a school day, how should schools select priorities and decide what to teach?
- How do subject-based standards nurture the habits, skills, and competencies that businesses, universities, and communities need and want, and that students, parents, and lay citizens recognize as useful?

The Panel indicated that while advice from this group of advisors would in no way be binding, it could help the new council begin discussing the issues for which it would be responsible and provide ideas to which the public and concerned constituents could respond.

The Goals 3 and 4 Standards Review Technical Planning Group developed the recommendations that it makes in this report through a set of discussions and activities. The Technical Planning Group and its subgroups met eight times between May and September, 1993 (May 28; July 16 and 27; August 2, 18, and 30; and September 8 and 16). Twice the Group discussed its charge and progress with the National Education Goals Panel. A subgroup applied the initial review criteria to the NCTM standards, and suggested revisions on this basis. The group held a half-day conference call with representatives of the major standards-setting projects on September 3. To get public comment on its work, the Group collected written testimony through a notice in the Federal Register and a request of targeted associations. The Group conducted a public forum for almost 300 participants in St. Paul, Minnesota, on September 7.

Public comment indicated strong public concern about the quality of education and the need for education standards. There was acute awareness that setting standards alone is not enough to reach them. There was anxiety that high standards could promote standardization and fail those now doing least well. Members of the public reminded the Goals Panel that for standards to succeed, they had to be understood and adapted by local communities, some of which may be concerned that aiming for "world class" standards may be unrealistic and rhetorical. While uncertain of the prospects for success, public comment nonetheless indicated strong recognition that clear standards are now missing and that concerted action would be needed to reach them. (See pp. 26-29, Responding to Public Concerns.)

The Technical Planning Group arrived at the recommendations in this report aware of these concerns and the scope of the problems they entail. Members discussed the obstacles to reaching high standards and the local nature of the processes by which they have to be attained. The Group discussed the painful social burden increasingly placed on schools. But even in the face of social problems weighing heavily and unevenly on neighborhoods and communities, members agreed on the need for high academic standards and expectations for all students. Inequities in current social realities were rejected as a justification for low expectations. High standards for all students were seen as the promise of American education, a promise that the Technical Planning Group wants to help the nation keep.

In this context, the Group focused upon its charge: to recommend criteria and processes by which challenging content standards might in the near future be reviewed and certified. Guiding principles for the review and certification of performance standards, essential for content standards to be effective, are also suggested. Although not charged to make recommendations on additional functions that NESIC will be charged to perform, such as the review of opportunity-to-learn standards, the Group makes explicit its assumptions about the character of NESIC and additional activities that NESIC may need to undertake to help it review and certify content standards.

In developing recommendations for the future council, the Technical Planning Group assumed, as the National Council on Education Standards and Testing had indicated, that the council would be national and not federal — as independent of the federal government as law allowed. The Group assumed that the legitimacy of the new council would rest upon its "moral authority," its intellectual contribution to those using and developing standards, and the reasonableness of its activities — not its ability to regulate.

The Group also assumed that submission of standards to the council by professional organizations and states would be entirely voluntary. This made the task of developing a review process that is legitimate and valuable even more critical. The process must have sufficient intellectual rigor and integrity to assure the public that standards would be important and worthy of adoption by states and communities. The process also needs to be of value to those developing standards and to increase the probable usefulness of their efforts.

III. RECOMMENDATIONS

HIGHLIGHTS

The Technical Planning Group has concluded that the process of creating high standards for American students entails both content and performance standards. Without both, the job is far from done. Their development has begun with "content standards" and the task will not be complete until meaningful "performance standards" are developed.

The key recommendations of the Technical Planning Group are as follows:

- Subject specific content standards, under development by professional organizations, should include a limited set of the knowledge and skills most important for students to learn in that discipline. The content standards are far more than a listing of facts, but go to the heart of the skills that spring from study of that discipline which enable students to develop sound learning and work habits.

- NESIC should certify content standards for only eight subject areas: English, mathematics, science, history, citizenship/civics, geography, foreign languages, and fine arts. However, NESIC could review and give written feedback on standards to any nationally recognized group that has developed standards and requested their review. Only one set of content standards would be certified in each subject area.

- State content standards should integrate subject-specific standards into a meaningful yet feasible set of standards for a state. Including a subset of the subject-specific content standards certified by NESIC (or aligned to them), the state standards would usually account for less than the entire school program, allowing for local school curriculum development.

- Performance standards would provide tools to determine whether the content standards are met, spelling out both the nature of the evidence required and the quality of student performance that would be considered acceptable to demonstrate that content standards had been met. Certification of content standards should be provisional until associated performance standards are developed.

- NESIC should take a broad view in its analysis of subject-specific content standards, identifying overlap, connections, and cumulative feasibility among the standards of different disciplines. NESIC should work with professional organizations to encourage that these issues be addressed as the standards are being developed.

DISCUSSION

"Content" and "performance" standards are integral parts of standards-driven reform. Yet the Technical Planning Group discovered that there is not clear agreement on definitions of these types of standards. Therefore, the discussion of the Group's recommendations begins by laying out specific definitions. The Group used definitions consistent with those of the Goals Panel and the National Council on Education Standards and Testing.

CONTENT STANDARDS

> **Content standards. Content standards specify what students should know and be able to do. In shorthand, they involve the knowledge and skills essential to a discipline that students are expected to learn. Those "skills" include the ways of thinking, working, communicating, reasoning, and investigating that characterize each discipline. That "knowledge" includes the most important and enduring ideas, concepts, issues, dilemmas, and information of the discipline. Content standards are not merely lists of facts. The National Council for Education Standards and Testing defined content standards in this way: "Content standards should set out the knowledge, skills, and other understandings that schools should teach in order for American students to attain high levels of competency in the subject matter."**

Two kinds of content standards are discussed below: subject-specific content standards and state content standards:

Subject-specific content standards are those developed by national professional organizations such as the National Council of Teachers of Mathematics (NCTM) that may eventually be submitted for review and certification in a specific subject area, such as mathematics, science, or history, and used as models or guides to states developing their content standards.

State content standards, like those now being developed in Colorado, Delaware, South Carolina and elsewhere, are content standards in a set or collection of different subject areas that may be proposed by a state for review and certification by NESIC. Substantively, state and subject-specific content standards can be the same and, where they are different, must be equally rigorous.

The Technical Planning Group was mindful of concerns that the standards must go beyond teaching of simple facts isolated in discrete disciplines. Students must learn how to solve important real world problems that require integrating knowledge and skills within and across several disciplines.

Part of the impetus to develop high national education standards arose from dissatisfaction with the nature and quality of the "content" commonly covered in schools today. On the one hand, lists of facts and bits of information devoid of a demand for understanding have too often defined subject content. Superficial recognition of information became a substitute for ever achieving deep understanding. On the other hand, these facts and bits of information have often been artificially categorized by discipline. But the problems of the world outside of school are not compartmentalized so neatly. Schools need to help students draw on an appropriate range of knowledge and understandings, habits, and skills to solve these problems.

In addition to what is subject-specific, content standards should therefore develop the skills and habits common to all disciplines that are essential to success in the real world. These skills and habits are what connect curriculum (the study of school subjects) to the purposes of schooling. They are the intentionally developed and habitual behaviors that help students succeed in life, even after the knowledge base has changed. These habits include the abilities to study well, think logically, support assertions with evidence, draw inferences, and apply what is known to a new situation. Students with good work and study habits are, among other things, persistent, attentive to detail, organized, reliable, responsible, cooperative, self-starting, and thoughtful. They have the competencies and foundation skills identified by the Secretary [of Labor]'s Commission on Achieving Necessary Skills in *What Work Requires of Schools*. These skills and habits enable students ultimately, in the language of the National Education Goals, to compete in a global economy, exercise the rights and responsibilities of citizenship, and use their minds well.

These habits and skills are central to the purposes of schooling, though not specific to any subject. The cultivation of these habits must be the responsibility of teachers in every subject (and therefore ought to be an essential part of the review of every set of content standards) if the knowledge and skills of the disciplines are to be understood and applied out of school to the problems the world presents.

Content standards logically define what schools should teach and what American students should learn. Schools and districts may provide curricula and instruction that cuts across these disciplines. Meeting content standards does not require rigid separation of the disciplines in teaching, learning, or assessment, but standards serve as anchors to support disciplinary integrity in interdisciplinary work.

Currently, there is confusion about the distinction between content and performance standards. Those working to develop standards in the subject areas have focused their efforts on defining what students should know and be able to do. They share with the Goals Panel and others the conviction that knowledge and skills cannot and should not be separated, but are linked to each other and to any deep understanding of subject matter. They share the conviction that standards worthy of certification are not just facts to be "covered" but also significant underlying principles that help students uncover the "so what?" of the subject matter. Unlike the Goals Panel, NCEST, and this report, some projects label as "performance standards" the skills, the ways of thinking, working, communicating, reasoning, and investigating within each discipline that are inextricably linked with the knowledge. Within this report, content standards refer both to what students know and are able to do — both their knowledge and skills. The group hopes that these valuable elements will be generally accepted as part of what is meant by "content standards."

Whatever definitions are agreed to, the Technical Planning Group concluded that there is a need for consensus on what these terms mean. Citizens and professionals need to develop a common vocabulary with which to discuss and develop standards.

SUBJECT-SPECIFIC CONTENT STANDARDS

The process of setting high academic standards has begun by developing standards that focus on specific subjects. In addition to its broad charge, the Technical Planning Group was asked to provide advice on two specific issues that relate to these subject-specific content standards: "Should more than one national set of standards be reviewed and certified in any one subject area?" and "In what subject areas (besides those named in the goals - English, mathematics, science, history, and geography) should voluntary national content standards be certified?"

The Technical Planning Group concluded that to reach the purposes of standards-driven reform, there can logically be only one set of national education standards per subject area. Certifying more than one set of standards in a subject implies that no set represents the core to which students, teachers, schools, and communities should commit themselves. Even if states exercise their authority to develop content standards that vary from those in other states, within a state only one set of standards per subject should operate.

Reflecting on how standards would be developed and used, the Technical Planning Group became concerned that the volume of content standards developed independently by separate professional organizations could overwhelm students, teachers, and schools by proposing more than any school day, year, or program (even if extended in length) could accommodate. If NESIC were to review and potentially certify as many sets of standards as were brought to it, it would in effect offer no guidance regarding the core set of standards that all students should master. For schools and the public to adopt standards, the process must ensure that taken together they are sufficiently delimited and focused so that it is feasible to implement them.

Therefore, the Technical Planning Group believes that it is imperative that the number of standards be limited - within and among disciplines. It suggests that all academic content standards currently being developed be reviewed against criteria listed below and that professional organizations be offered written feedback indicating the extent to which the criteria were met, but that standards be certified only in English, mathematics, science, history, geography, citizenship/civics, foreign languages, and arts. (See additional discussion of Review and Feedback, p. 16)

NESIC was envisioned as an entity to certify academic standards in areas of recognized scholarship; therefore, it would not review all the subjects currently taught in schools. Other groups such as an occupational standards board or the President's fitness council might review other subjects.

Documents to be Reviewed and Certified

Organizations proposing subject-specific standards for certification would prepare these documents:

- **A concise core content document** stating the standards.
- **A case statement** explaining how the review criteria are met.
- **An appendix or separate document** offering examples of teaching and assessment activities aligned to the standards.

The Standards Review Technical Planning Group recommends that content standards be submitted in **a concise core content document**, accompanied by **a case statement** explaining how, in the judgment of the professional organization submitting them, the review criteria have been met. The content standards document should be short, cogent, and clearly focused upon the content proposed as core to the discipline. This document should clearly focus upon the most important and enduring knowledge, ideas, concepts, issues, dilemmas, and ways of thinking, working, reasoning, communicating, and investigating that characterize the discipline and are likely to encourage valued knowledge, skills, and habits.

While teachers, states, and professional associations may find value in developing a comprehensive list of all the information and skills desirable for high school students to learn and appropriate for advanced levels of study, it is not envisioned that such a document will be reviewed and certified.

Nonetheless, professional organizations submitting subject-specific content standards should provide examples that show how the standards in the core content document may be assessed and used for appropriate curriculum and teaching. For content standards to be acted upon, they should suggest to teachers, administrators, test makers and other audiences the direction that curriculum, instruction, and assessment may take for the standards to be reached. **Either an appendix or separate document** should indicate the kinds of evidence necessary to demonstrate attainment of the standards and provide exemplars of assessment tasks, instructional supports, and teaching activities implied by the standards. These illustrative tasks, supports, and activities, while only suggestive and not themselves to be certified, would be needed to demonstrate how proposed content standards meet the clarity, useability, and assessability review criteria.

Review Criteria

The Technical Planning Group suggests that proposed subject matter content standards be reviewed to determine if they are:

World-Class

> Standards should be world-class and challenging. To meet this goal, proposed standards need to be compared with current standards and priorities in other countries. Standards should be high - as challenging as or more challenging than others in the world, but not necessarily the same. (See pp. 17-18 for additional details on how this criterion may be addressed.)

Important and Focused

Standards should focus upon a limited set of the most important and enduring knowledge and skills. The set should show parsimony in selecting the most essential knowledge, issues, ideas, questions, problems, concepts and dilemmas, and ways of thinking, working, reasoning, communicating, and investigating the world that are central to the discipline and to work and learning. They should both set priorities and indicate the range of subject matter that is essential for students to understand. When taken together, the elements within the standards should provide the prerequisite framework of knowledge and skills needed to continue learning.

Useful

Standards should be useful. They should address the needs of employers, communities, and post-secondary educators. Proposed standards should promote the development of the knowledge, skills, and habits that employers, communities, and universities require, including the ability to integrate knowledge and skills from multiple subjects and apply them to the solution of real world problems. Proposed standards should demonstrate to educators and lay people that more will be expected of students and that the standards will help them meet the fundamental goals of schooling:

- to know and be able to do what is central to the discipline.
- to use their minds well within the discipline.
- to know how to learn (within and outside of school).
- to be prepared for responsible citizenship with discipline-specific tools.
- to be prepared with discipline-specific skills and knowledge for productive participation in the global economy.
- to apply knowledge and skills from a variety of subjects to the solution of real world problems.

Reflective of Broad Consensus-Building

Standards should result from a reasonable and inclusive process. Consensus should be sought in an iterative process of broad comment, feedback, and support from professionals and the general public at the school, neighborhood, community, state and national levels. Those applying for standards certification should indicate who was involved in the process, how they were involved, what aspects of the final and interim products were reviewed, and what resulted.

Balanced

Standards should represent a reasoned and acceptable balance on a set of enduring tensions or polarities. The case statement submitted by those proposing the standards should indicate how they satisfy the competing demands for:

- depth - and - breadth; i.e., the ability to demonstrate deep understanding of subject matter - and - knowledge of the main ideas and essential information on a range of topics;
- being definite, specific, or precise (about the uniform core that all students should know and be able to do) - and - being permissive of alternatives (so teachers have the flexibility to adjust to the needs and heritages of their students and the learning environments in which they teach);
- learning the theory or underlying principles of a domain - and - covering its factual knowledge;
- formal knowledge of theory or principles and facts - and - activities, performances and applications of knowledge;
- the best new thinking about the domain - and - the best of traditional practices and conceptions of the domain.

Accurate and Sound

Standards should accurately reflect sound scholarship within the discipline. Documentation should show whether scholars and scholarly associations have commented on and concurred with the standards' technical merit (as distinguished from the priorities and point of view).

Clear and Usable

Standards should be sufficiently clear so students, teachers, and parents — with reasonable interpretation — can be helped to understand what the standards mean and what the standards require of them. The standards should be clear enough to guide the development of appropriate curricula, curricular frameworks, instructional materials, and professional development. They should be clear enough to enable teachers and students to judge whether the standards have been met. The standards (or associated documents) should provide examples, model tasks, and samples of what is meant by an acceptable performance from a typical student as well as an outstanding performance on the sample task. While these examples would not be certified, they must be provided to make clear to teachers and curriculum specialists the direction that curricular reform must take to achieve the standards. The standards should be sufficiently clear and reasonable so that they can be understood and supported by a layperson applying "common sense," as well as by businesses and universities seeking better-educated high school graduates.

Assessable

Standards (and associated documents) should be sufficiently specific so that their attainment can be measured. They must indicate the nature of the evidence (such as an essay, mathematical proof, scientific experiment, project, exam, or combination of these) that would be required to judge whether the content standard(s) in the subject had been met. Examples of potential assessment tasks, while not themselves subject to certification, are required to demonstrate that the content standard is assessable. Standards should be specific enough so that with reasonable interpretation they can inform each of these groups and their needs:

- Teachers (Can teachers use the standards both to teach and to recognize and assess student and program performance and talk with each other and with students about student performance?)
- Assessment makers and users (Can test publishers, local districts, state departments of education, assessment experts, those monitoring educational performance over time, and policymakers use the standards to design and/or interpret the results of assessments?)
- Students (Can students use the standards [or, with interpretation, documents associated with them] to self-assess their own work and learning?)
- Parents (Can parents make sense of the standards in terms of their own children's work?)
- Taxpayers and the lay public (Will citizens paying for and asked to support local schools be able to connect the results of assessments of these standards to the purposes of schooling?)
- Business and universities (Can employers and college teachers and admissions officers connect the knowledge, skills, and habits being measured to their business and higher education needs?)

Adaptable and Flexible

Standards define what is most important for students to know and be able to do in each subject. While students should be expected to reach the same world class standards, proposed standards (and associated documents) should provide enough flexibility in implementation to accommodate state and regional differences and local control of education. Standards should be suitable for differing individual student interests and cultural traditions. Those proposing standards should provide evidence that they considered a range of different environments, experiences, and cultural traditions in which the standards may be implemented.

Developmentally Appropriate

The standards proposed should support and challenge students achieving at all performance levels. While they should not represent minimum expectations, the standards should be suitable to and within the capabilities of students to learn. (See section on Serving Students in Special Education, pp. 27-28). Regardless of students' perceived ability, the standards should be achievable with proper supports and sustained effort. They should build appropriately on students' developed capabilities at the elementary, middle, and high school levels of schooling. Any student who works hard in a good program should be able to meet the standards, and any student who meets the standards should be well prepared for his or her future.

Additional Guidance

Review and Feedback

The Technical Planning Group recommends that standards submitted by nationally recognized organizations be accepted for review and feedback even when they are not being reviewed for certification. In this case the review criteria would be applied to draft academic standards, and NESIC would offer written feedback indicating the strengths and weaknesses of the standards against those criteria.

This application of the review criteria may be useful for two audiences: those preparing standards for ultimate certification before their final drafts and revisions are made, and those preparing standards in academic subjects for which NESIC will not certify standards. Written feedback could be used for revisions or evidence of success in meeting review criteria. Groups developing standards in subjects that NESIC declines to certify (in such subjects as economics, regional studies, or advanced and specialized fields of study) may nonetheless request that NESIC review and offer feedback indicating whether the standards meet the review criteria. This service may be of particular help to the states and districts offering specialized or advanced levels of study.

Periodic Review Cycles

The Technical Planning Group was asked to consider in what sequence proposed subject-specific standards should be reviewed. The group recommends that all standards submitted by a date prescribed by NESIC be reviewed as part of a single cycle, and that NESIC establish a schedule of review dates indicating periodic cycles for review and certification.

Recertification

Content standards that meet these review criteria will offer valuable guidance to states, local school districts, curriculum specialists, and classroom teachers. Standards that focus upon what is most important and enduring will last without frequent need for revision. Nonetheless, to ensure that the standards are dynamic, and not static, and support continuing improvements in the education system, the Technical Planning Group recommends that standards be recertified at regular intervals. Recertification should be often enough to permit revision of the standards based on experience but at sufficiently lengthy intervals to give stability to the system and permit realistic alignment of curricula, instructional materials, and assessments before the standards change.

Partial or Provisional Certification

The Technical Planning Group recommends that certification of content standards be made provisional upon the development of associated performance standards. Content standards are being developed, but as yet there is little progress towards specifying the nature and quality of evidence required to determine if they have been met. (See discussion on Performance Standards, pp. 22-23.) Without performance standards and associated assessments, students, parents, schools, and communities have no way to determine their status with relation to the content standards.

As a first step, the Technical Planning Group recommends that content standards be required to provide examples of teaching and assessment activities and specify the nature of evidence needed to determine whether the content standards have been met.

Other circumstances that may merit partial or provisional certification would be: a set of potentially sound standards that fall short on one or more criteria, or submission of state content standards before national professional organizations in "core" subject areas have been completed and certified.

Guidance on Applying the "World-Class" Criterion

An important reason for developing education standards is to help ensure that American students learn what they need to compete at "world class" levels in the global economy. Recognizing that professional organizations are properly focused on identifying what is central to their discipline, and therefore dependent on knowledge collected by others regarding the standards set in other countries, the Technical Planning Group believes that NESIC should offer guidance on how the case statement of subject-specific content standards addresses the "world class" review criterion. The concrete guidance NESIC could offer may include:

- **Identify no more than 3 or 4 countries** that have performed well on international surveys of school achievement, or that have shown leadership in the pedagogy of the subject area. Identify a small group of countries to which U.S. subject specialists would like to have the U.S. compared. Some might be those considered influential countries with sizeable populations, such as Germany, Japan, China, France, or Russia. Others in a list of countries to be used for comparison should be those with strengths in particular areas, such as Australia, the Netherlands, Korea, Ontario and Quebec provinces of Canada, and Sweden. Some must be those in which student achievement in the discipline is high.

- **Specify the particular school types and grade levels in the particular countries being used for comparison.** Try to specify what fraction of the age-group is affected by the particular standards used in comparison. This is very important. For example, Japanese standards tend to be fairly uniform across the entire educational system for a given subject and grade level. This is not so in England/Wales, Germany, and France, where different tracks, institutions, and options provide different standards. Indeed, most countries operate more than one standard at a given grade level.

- **When comparing the end-of-secondary-school standards of other countries with those proposed for the U.S., watch out for differences in the age of students to which those standards apply**. For example, in Germany, it is not uncommon for Abitur candidates to be 19 (in some cases, even 20) years of age; in Japan, there is a great deal of repeated taking of the university entrance examinations after a further year or two of study.

- Be aware that standards are changing fairly rapidly in many of the countries that are likely to be used in comparison. Be careful to **note at least the approximate date(s) of the standards being cited -- the more up-to-date, the better**.

- There are multiple sources of material that can be used to infer the standards that are sought after in other countries: **curriculum guides** issued by ministries of education, and regional and local education authorities; **reports of school inspectors**, especially school-subject inspectors; the **regulations, test papers, and reports issued by examination bodies**, especially reports issued on the candidates' achievement in the examinations; **studies** of curricula published by the national collaborators of the IEA organization, in connection with their international studies of school achievement; **reports** by U.S. and other subject specialists who have studied the curricula, teaching and learning goals and methods, and assessments used in specific countries.

- The standards embodied in the document(s) proposed for certification in the U.S. can be compared with those of some other countries by comparing, for example, the breadth and depth of material in the subject area; by comparing its up-to-dateness, the pedagogical methods it implies, and the extent to which it involves students actively in the learning process; and also by judging how far the proposed standards for the U.S. encourage desirable work and learning habits, compared with what is known about standards in the other countries selected.

(For further discussion of this issue, see Appendix C.)

STATE CONTENT STANDARDS

The Technical Planning Group was asked how subject-specific education standards teach students to solve important real world problems that require integrating knowledge and skills from several disciplines. The question is one of urgent importance. While the question must concern the disciplines themselves, the group recognized that states have the operational responsibility for adopting standards in multiple subjects and considering how they fit together.

National content standards are intended to offer guidance to states in this activity. The Technical Planning Group recommends that states propose a subset of the eight sets of NESIC-certified content standards as a common academic core required of all students in the state. The common core should ideally account for less than all the time and the full academic program of instruction. To allow latitude for local and school curriculum development, "core" state standards should leave room for "more" local elaboration of content. Schools and communities could offer or require the study of additional or advanced standards and a range of other significant and valued experiences that would not be certified by NESIC. An important responsibility of any new council, however, would be to examine the "core" set of standards each state proposes to ensure that these are feasible and cumulatively adequate.

In most cases, states would use NESIC-certified standards as a point of departure and continuing point of reference in their own state consensus-building efforts. National professional organizations that understand this need and take it into account will produce work of increased usefulness for states. Since some states are rightly pioneering their own standards before national content standards have been developed, they could submit their state content standards for provisional certification before standards from national professional organizations have been developed or certified in all subject areas.

As indicated above, the Technical Planning Group believes that for standards to be useful it is imperative that they be feasible to implement. Further, the Group is not certain whether subject-specific content standards generated independently by separate professional organizations will fit together and be feasible to implement.

It will be an important role for NESIC to offer assistance to the states in this effort. The Technical Planning Group recommends that NESIC analyze the national set of subject-specific content standards they certify for points of overlap. Occasionally, the same or similar content may appear in more than one set of standards. For instance, an analysis of the U.S. Constitution could conceivably be proposed as an element of both history and citizenship/civics standards. In addition, NESIC could help states by identifying promising areas of interdisciplinary study or publicizing promising areas developed by states. Some knowledge and skills within one discipline may be suitable to connect to material from other disciplines. For instance, English standards for reading and writing may be applicable in history and science, and mathematics standards may illuminate physics-related science standards.

States would be asked to show how the set of core content standards they would require for all students cumulatively address the basic purposes of schooling — educating students, in the words of Goal 3, "for responsible citizenship, further learning, and productive employment in our modern economy." Not every subject would not be expected to meet this test in isolation. In addition, the Technical Planning Group recognizes that each subject may contain important additional elements (such as the appreciation of poetry, artistic beauty, or mathematical logic) that are valued for themselves and not for their utility to society.

On the other hand, each state would want to be certain that the essential purposes of schooling would be realized by achieving the cumulative set of content standards they propose. For instance, certain valued knowledge about citizenship might be indicated in selected history or civics standards but not in mathematics standards. Similarly, selected science and mathematics standards may have special occupational relevance.

An important task of NESIC will be defining the attributes that they deem essential to judge whether a proposed set of state content standards cumulatively fulfills these purposes.

Documents to be Reviewed and Certified

- **A set of core content documents** stating the standards selected by the state as part of the core required of all students.
- **A case statement** explaining how the state review criteria have been met, and how any content standards not previously certified by NESIC meet the subject-specific review criteria.

The state would submit **a core content document for the set of standards** that students would be required to study, indicating the relative emphasis each will be given at the elementary, middle, and high school levels. The state would prepare **a case statement,** explaining how the state standards are aligned with NESIC-certified standards; where different, how they meet the review criteria for subject-specific standards; and how, taken together as a set, the state standards meet the review criteria set for state standards.

When content standards submitted by states for certification are viewed together, they should make sense as a whole. State content standards need to fit together to define the core that schools are required to teach and all students are expected to learn within a given state.

Review Criteria for State Content Standards

The Technical Planning Group therefore suggests asking whether content standards proposed by states are:

At Least as Rigorous as National Subject Standards

State standards should be at least as rigorous as national content standards, and if not the same, equally able to meet the content review criteria above. States would not be required to organize their curriculum frameworks in subject-specific sequences proposed by discipline-based professional organizations. They would be at liberty to organize curricular frameworks around important themes that cut across subject disciplines. They would, however, be asked to demonstrate how the standards they proposed are aligned with national standards.

Cumulatively Feasible

Taken together, each state's standards should be feasible for schools with appropriate resources to implement. Any student who works hard in a good program should be able to meet the standards, and any school working to implement the standards should be able to do so.

Cumulatively Adequate

When state content standards proposed for certification are viewed together, they should make sense as a whole. Taken together, each state's standards should define an adequate "core." Each state should indicate what it requires from the standards certified by NESIC in English, mathematics, science, history, geography, citizenship/civics, foreign languages, and the arts. The level of emphasis a state proposes at the elementary, middle, and high school levels for each of these areas should be indicated.

Whatever standards and levels of emphasis states require, the state's case statement should explain how cumulatively the standards prepare all students with the knowledge and skills necessary to compete in a global economy, exercise the rights and responsibilities of citizenship, and use their minds well. The state should indicate how any student who meets the standards proposed would be well prepared for his or her future.

Encouraging of Ability to Integrate and Apply Knowledge and Skills

The set of content standards submitted by each state in association with relevant performance standards should demonstrate that students would be asked to integrate knowledge from various subjects and apply that knowledge to the solution of real world problems.

Reflective of Broad State Consensus-Building

Standards should result from a reasonable and inclusive process. Consensus should be sought in an iterative process of broad comment, feedback, and support from professionals and the general public throughout the state. Even when adopting nationally certified standards, states applying for standards certification should indicate within the state who was involved in the process, how they were involved, what aspects of the final and interim products were reviewed, and what happened as a result.

PERFORMANCE STANDARDS

> **Performance standards. Performance standards specify "how good is good enough." In shorthand, they indicate how adept or competent a student demonstration must be to indicate attainment of the content standards. They involve judgments of what distinguishes an adequate from an outstanding level of performance. The National Council for Education Standards and Testing defined student performance standards in this way: "Student performance standards should establish the degree or quality of student performance in the challenging subject matter set out in the content standards." Performance standards are not the skills and modes of reasoning referred to in the content standards. Rather, they indicate both the nature of the evidence (such as an essay, mathematical proof, scientific experiment, project, exam, or combination of these) required to demonstrate that content standards have been met and the quality of student performance that will be deemed acceptable (what merits a passing or an "A" grade).**

Performance standards relate to issues of assessment that gauge the degree to which content standards have been attained. For instance, a standard indicating that students should draw accurate inferences from historic, scientific, or literary text is a content standard. A performance standard indicates the nature of the evidence and the quality of the student performance required to show whether students have learned this. It would, of course, be possible over time to raise performance standards without changing content standards.

Performance standards give meaning to the results of assessments of student performance. In the popular mind, people "know" that on a 100-point test 89 is pretty good and 55 is not passing. This is one kind of performance standard. So far, no one "knows" how to judge whether the new content standards have been met. Mastery of challenging subject matter may not be measured on a 100-point test. There is an urgent need to develop new and improved assessment technology.

The Technical Planning Group endorses the following general principles to guide the development of future performance standards.

- Performance standards should be tied to NESIC-certified content standards and to the kind of instruction that helps students achieve the content goals.
- They should encourage tests of knowledge, skills, and understandings that are valued and what it is believed that students must have, not what is easy to measure.
- Assessment tasks should measure knowledge and skills across the core disciplines as well as within them.
- Assessment tasks should measure students' ability to apply what they know to real world problems, not just their ability to recall or recognize what was taught.

- Assessments should allow for audits of both system and student performance.
- Performance standards of how good is good enough should ultimately be set collaboratively by teachers, professors, and representatives of employers and the public in an iterative process that examines actual samples of real student work and is informed by international performance.
- Examples of real student performances that meet and exceed performance standards should be provided routinely for the public, students, teachers, and parents. Until this happens, the meaning of the content standards will not be apparent to those trying to achieve them.
- Teachers should understand and internalize the performance standards and instructional strategies to help students master the content. This will require additional professional development.

Such performance standards linked to content standards are not yet available. Professional organizations developing standards are concentrating their efforts on specifying what students should know and be able to do. The Technical Planning Group has recommended that these content standards be reviewed to determine if they include examples of possible assessment tasks and specification of the nature of the evidence proposed as necessary to show that content standards are met. While the examples themselves would not be certified, they should be included to meet the criterion for being "assessable," and to point the direction for the development of assessments.

Assessments could be developed by standards developers, a state, groups of states, test developers, or others. Those assessments would be informed by the original standards development process, and in turn would be used to produce samples of real student work. Those samples of student work would ultimately be part of the empirical basis for setting performance standards. When samples of U.S. students' work can be compared to student work from abroad, performance standards can be benchmarked to international levels of student performance.

It is likely that the assessments which are eventually developed will require students to demonstrate competencies across several fields at the same time. For example, a 4th grade science activity might rely on graphic representation of data (reflecting a related mathematics standard), and the written presentation of results (reflecting a writing standard) as well as provide evidence of accurate interpretation of reference material (reflecting upon a possible reading standard).

Performance standards should be part of an iterative process set in conjunction with the content standards. Performance levels specifying acceptable and outstanding levels of quality of student work need to be examined against actual samples of student work. Samples of real student work need to be available before linking important consequences to students' achievement of specific performance levels.

CHALLENGES FOR NESIC

The Technical Planning Group recognizes that the task before the future National Education Standards and Improvement Council is complex and challenging.

The Group was asked to focus on potential criteria and processes that NESIC should use to review and certify content standards, and to consider their implications for performance standards. In the course of addressing this charge, the Group identified additional functions that it thinks NESIC will find necessary to review and certify content and performance standards adequately. It offers these as additional guidance. Among these are to:

- **Collect and encourage the development of information regarding the standards of other nations.**

This knowledge base is essential to gauge whether standards proposed by professional organizations for the United States are in fact "world class" and "internationally competitive." The Technical Planning Group believes that while it is fair to require standards groups to know and consider such information, it is not fair to require them to develop this information where it does not exist. The application of the "internationally competitive" review criterion may initially take different forms in different subject areas, because the current state of information is uneven. The Group recommends offering standards projects guidance on how to do this, and suggests specific steps on pp. 17-18. Nonetheless, the Technical Planning Group considers it important over time that a solid knowledge base be created against which to judge whether proposed standards are empirically and appropriately world class and internationally competitive.

- **Define the attributes necessary for state content standards to be judged cumulatively both feasible and adequate.**

The Group sees the need for state content standards to be focused upon a limited core of standards that are feasible to teach and learn, yet adequate to prepare students for citizenship, work, and continued learning. This entails an inevitable tension between parsimony and comprehensiveness. Since NESIC will be asked to review and certify state and well as national, subject-specific standards, it will need to determine what it will require to meet both criteria, and how it will define the irreducible requirements of schooling.

The Technical Planning Group could easily agree that there is a need to limit the set of state content standards to what is feasible and important for schools to implement, teachers to teach, and students to learn. The Group anticipated the counter-pressures to be inclusive of every set of subject matter standards that could meet review criteria. The need for parsimony and focus led members to want to designate four or five subject areas as "core" areas of emphasis that every state should require of all its students. However, the Group was unable to reach consensus on what the limited number of subjects should be, and indeed, whether core standards had to be organized by subjects. It therefore recommends more generally that standards in English, mathematics, science, history, geography, foreign languages, citizenship/civics, and the arts should be certified nationally, forming the set from which states would usually identify their "core."

- **Ensure analysis of the set of nationally certified subject-specific content standards to identify areas of overlap and areas where connections among the disciplines can profitably be made.**

The Technical Planning Group was asked by the Goals Panel to recommend the subject areas besides those named in the Goals in which national content standards should be certified. From its first meeting the Group has discussed the tension between reviewing and certifying standards by subject area and teaching students to solve important real-world problems that require integrating knowledge and skills from several disciplines.

It would be optimal if the professional organizations developing standards themselves voluntarily address this problem, and identify the overlap, connections, and cumulative feasibility and adequacy of the standards they propose for certification. The Technical Planning Group recommends that NESIC cooperate with and encourage those organizations to do so. The Group respects the technical and political complexities and importance of addressing this issue.

If the results of voluntary cooperative efforts are incomplete, the group recommends that NESIC itself must recognize and address these issues. NESIC's own review process should consider whether proposed standards present suitable opportunities for interdisciplinary study. NESIC should consider how the national content standards in the eight subjects they certify fit together and whether, if taken together, they are feasible for a school to teach or a student to learn. Any state or professional organization offering content standards that are more or different than those certified by NESIC in English, mathematics, science, history, geography, foreign languages, citizenship/civics, or the arts should bear an extra burden of demonstrating how they connect to the other disciplines and could be used in an interdisciplinary framework.

Finally, the Group recommends that NESIC, acting with and building upon work of the professional organizations that developed the standards and with many other concerned public and private groups, should promote the development of multiple models of how the content standards they certify could be configured for instruction and for interdisciplinary study. Should these not be forthcoming from the efforts of other groups, NESIC retains responsibility to ensure that examples of how content standards might be fit together in a framework other than the subject categories in which they were proposed and certified are developed. Such examples could be drawn from ongoing work of states, from collaborative activities undertaken by the standards development projects themselves and other professionals, or from other sources.

The result should be that states with limited financial and technical resource seeking "the path of least resistance" should have available to them at least one model of how to feasibly implement national content standards using an interdisciplinary approach, without feeling constrained to impose subject-specific curricular frameworks. This will entail mapping backward how an interdisciplinary framework is aligned with subject-specific content standards.

The Group therefore recommends that NESIC, building upon work done by national professional organizations developing standards, review and analyze the set of subject-specific content standards they certify to identify areas of overlap and areas where connections among the disciplines can profitably be made. The results of this analysis should be made available for states and districts working to develop their own state content standards and curriculum frameworks and curricula. This will entail mapping the areas of content shared among subjects.

- **Insist upon rapid development of performance standards.**

Members of the Technical Planning Group believe that performance standards are imperative for content standards to be effective catalysts of reform. While content standards indicate what society needs students to know and be able to do, performance standards, indicating the nature and quality of student performances required to gauge how good is good enough, are necessary to judge whether the content standards have been met. (See definitions above on pages 9 and 22.) Without them, students and teachers do not know whether they are measuring up to the standards, and they lack incentive to work towards them. For this reason, the Technical Planning Group recommends that certification of content standards be made provisional upon the development of associated performance standards.

While good work is now going on to define what content standards should be, much remains to be done to develop performance standards. The Technical Planning Group recommends that professional organizations be asked to begin this as an iterative process while they refine content standards. Specifically, the Technical Planning Group recommends that to meet the "assessable" criterion, content standards (or associated documents) should provide examples of possible assessment tasks and specify the nature of the evidence needed to judge whether content standards have been met.

The Technical Planning Group is concerned at the amount of work that remains to be done to develop performance standards for review and certification. They hope that funding to support such additional work will be forthcoming, and suggest that NESIC convene representatives of the professional groups that developed content standards to work with assessment specialists, teachers, parents, employers, university representatives, and representatives of other standards groups in that process of developing performance standards.

RESPONDING TO PUBLIC CONCERNS

The Technical Planning Group wants to respond to important concerns expressed in the oral and written public comments it received.

- **Avoiding Standardization**

One concern expressed to the Technical Planning Group was that education "standards" would require educational standardization. The concern was expressed that holding all students to the same high standards would necessitate teaching them all the same thing in the same way, thereby reducing local discretion and teachers' creativity.

This is not the intention or expectation of the Technical Planning Group. To the contrary, it is the purpose of standards to offer a clear understanding of expectations that can validate and liberate creative educators to invent a variety of methods for attaining the standards.

That is one reason it is so extremely important to keep standards focused upon a limited set of knowledge and skills of enduring importance. The standards should express the issues to which able teachers tend to return. Broad leeway for appropriate local adaptations and creative treatment of them should be not only permitted, but encouraged.

▫ Helping Disadvantaged Students

Concerned citizens and educators expressed anxiety about what high academic standards would do for poor and disadvantaged students. They worry that students who are performing poorly now may experience more failure if held to higher standards.

The Technical Planning Group shares this concern for equity, and is concerned at the obvious inequities of social burden and resources among American schools. But the group feels strongly that those inequities should not be used to justify perpetuating low expectations for some. Without high standards being made explicit, it can be perniciously easy to justify the status quo. Some students from privileged backgrounds can and do muddle relatively unscathed through schools of indifferent quality. It is the least advantaged students and the schools serving them that may gain the most by having explicit standards make the goals of instruction transparent and accessible through effort.

▫ Serving Able Students

The call to set standards and raise expectations for all students concerns some members of the public who fear that new standards will be minimum competencies. These could encourage schools to convey "basics" to everyone at the expense of advanced material for students ready for greater intellectual challenge.

The purpose of standards-driven reform is to include everyone in deeper understanding of the most important and enduring knowledge and skills. To succeed, the nation must raise achievement at all levels - among the most able as well as the average and the disabled. Students will vary in their performance on the standards to which all are held. There will be advanced levels of study and achievement that build upon the sound foundation of those standards held for all. An index of success will be the wider attainment of high levels of performance, and increased enrollment in advanced levels of study. Aesop recognized that a persistent tortoise can achieve its goal before an easily diverted hare, but just think what a persistent hare can achieve!

▫ Serving Students in Special Education

Standards set by national professional organizations will be appropriate for many students now served in special education. Orthopedically handicapped students, for instance, would be taught, study, be assessed, and expected to reach the same levels of performance on the same academic standards as other students. For students with some disabilities, it might be appropriate to modify the conditions of instruction and methods of assessing attainment of those standards.

All students should be held to high and appropriate standards, and should be included in efforts to characterize the nation's level of education achievement. The standards discussed in this report would apply directly to all students except those, like the severely mentally retarded, whose individual diagnosis implies a judgment that the student cannot meet them. The Technical Planning Group defers to health and special education professionals to identify on a case by case basis the standards, both the content and level of performance, appropriate for these students.

- **Being both American and World-Class**

Some worry that striving for internationally competitive levels of achievement may make American education less American. They fear that high levels of achievement require elite and authoritarian values that Americans do not share.

The Technical Planning Group believes that, just as there is much to celebrate about American education, there is something to be learned from the experience and success of other countries. At the same time, we believe that other countries' education practices, even when effective, may not be suitable for American schools. Those developing education standards for America should inform themselves about the standards, achievement levels, and school practices of other countries - not to copy them, but to adapt what is of value for uniquely American contexts and goals.

- **Being Realistic about High Standards**

Some who gave testimony, while recognizing that de facto standards are much too low, fear that nothing more is realistically possible. Whether it is the need for a lot more money, or training, or motivation, or political will, they fear that the ingredients are not there and that the call for high standards is just more rhetoric. Specifically, it seems unrealistic to set high standards for all students in view of the problems of severely mentally retarded students.

Whether the issue is money, public support, or political will, these big challenges require us to temper the usual human desire for a "quick fix." Significant success is likely to come slowly and perhaps even painfully if we resist the move to what is unfamiliar. Nonetheless, success is possible.

Standards can make clear that schoolwork is not a test of natural aptitude, or another way of sorting people into groups, but centers on a set of important skills and ideas that are useful in the world and accessible to every one who works at it. The likelihood that severely mentally retarded students may not reach the performance levels attained by other students and that the most able students may exceed them does not make high standards less realistic for the nation. Standards that point the way towards what is significant to understanding the world and useful to prospering in it may realistically merit and inspire the effort by all students to work toward them.

- **Not just giving a new name to an education "fad"**

Some members of the public are concerned that standards-based reform is just another fad that they can wait out until public attention to them fades. Others associate it with "outcomes based education," and attempts to teach vague values.

Standards do seek to shift the focus of education to what students should learn and schools should teach, but standards-based reform is not a new tag for outcomes based education.

Scholars, educators, and lay people are developing standards in academic disciplines. The Technical Planning Group recommends that standards groups and states conduct public dialogue and broad-based consensus-building efforts in the development of standards. Provision for public comment and input is part of each of these efforts.

Standards can enable parents and communities to take more control and responsibility for local education. They indicate the core academic purposes that schools are intended to serve, and differentiate them from the social functions given to schools when family and community do not or cannot address them.

IV. CONCLUSION

The Goals 3 and 4 Technical Planning Group on the Review of Standards was asked to address important questions — to identify the fundamental issues that must be dealt with for standards-driven reform to succeed. We took this charge seriously, knowing the significance of the consequences. The experience was demanding - both stimulating and humbling. Each of us found ourselves exploring unchartered territory as we tried to think out the consequences of various approaches that might be taken, and all found their thinking expanded by the process we underwent.

Although we came from different places demographically, occupationally, geographically, and philosophically, we found it surprisingly easy to agree on the review criteria recommended in this report - and on the work still to be done, and the level of effort and wisdom that would be needed. The process in which we engaged is one we believe that communities across the country need to undergo. While policies and recommendations could be adopted without such debate, it requires conversations of this kind to produce the conviction and deep understanding that will enable standards to help the many facets of educational renewal.

Thus we emerge with increased appreciation for the complexity of the task and the work that remains to be done. It is critically important that a core set of the discipline-based standards be defined that make sense when discussed by the public, teachers, students, and school systems. Both NESIC and the states have responsibility to see that these standards make sense together so that cumulatively they are both feasible within the daily operation of schools and over the longer term of the school program, and adequate to achieve the purposes of schooling and the promise of American education. We fully recognize the magnitude of the intellectual challenge and the political difficulties involved. But this is a task that must be accomplished to keep the educational promise of America for its citizens and their future.

American education needs high standards against which to measure success and expectations. Raising our educational performance is a long-term, systemic effort. We do not know all that must be done to reach high standards, but we do know that high standards themselves are a critical first step. We hope this report helps to move that reform ahead.

We hope this report is useful to those who will be charged with certifying high standards for American students and to all the Americans working to keep the promise of education for the next generation.

V. Individual Member Comments

David Hornbeck

I have read the report *Promises to Keep*. Its recommendations are sound. I join in supporting it as we present it to the National Education Goals Panel.

However, there is one critical area in which the report is deficient. We are silent on the relationship of opportunity to learn standards to the certification of content or performance standards or the assessment strategies that can measure those standards when those standards are to be used for high stakes for students. I recognize that it was not explicitly in our charge. Neither were other topics we do address because they seemed to us to be important consequences of the recommendations that we were asked to make. Opportunity to learn standards meet that criterion.

I oppose the bean-counting, mindless, narrowly drawn opportunity-to-learn standards that those who oppose them offer as illustrations of what OTL standards will be. In contrast, I support OTL standards such as:

- A process whereby student achievement results would be examined to determine which schools may need assistance;
- Professional development rooted in educator standards reasonably calculated to maintain a competent teaching force;
- A system of school/district incentives tied directly to student achievement improvement by all students; and
- Policies regarding curriculum and instructional materials that would help students meet performance standards.

It is, of course, possible to implement OTL standards badly. Surely that is not a reason for paralysis. That fear can apply to content and performance standards and to assessment strategies as well. The challenge is simply to do it right.

I do not call for the full implementation of OTL standards as a pre-condition to anything. I do think it imperative that a state present evidence that it has at least thought about the OTL issues and has designed a plan of action reasonably calculated to lead all students to achieve the academic standards sometime, however many years out a state may want to project.

We properly say in the report that content standards cannot be fully certified until performance standards are established, since the usefulness of the former depends on the latter. Content and performance standards are equally useless unless students, teachers, and parents have fundamental tools to do the job and work in schools that function within a policy framework that comprehensively encourages rather than inhibits high achievement by students and quality teaching by teachers.

Shirley Malcom

I fully share David Hornbeck's concern for equity and the importance of using standards to help improve schools and student achievement, the intended purposes of opportunity-to-learn standards as he has described them. My personal experiences warn me, however, that the well-reasoned positions he states may not be operationalized or implemented in the way he proposes.

I was born Black and female and educated in the separate and unequal schools of Birmingham, Alabama in the 1950s and early 1960s. I have personal experience with systematic denial of opportunity to learn. Having lived through a lifetime of perversions of policies which were intended to make a positive change, I want to caution us all (1) that reasonable statements can be reduced to meaningless indicators, (2) that demands for measurement can further entrench harmful practices, and (3) that more effort can go toward satisfying the letter of prescribed input "standards" than their spirit.

At bottom, a student's real opportunity-to-learn is a function of his or her relation to a teacher in a classroom in a complex but specific learning environment. The best indicator of this opportunity to learn is student learning -- the achievement of high levels of skills, knowledge, and understandings in challenging subject areas measured by rich and appropriate assessments.

It is difficult to define the specific inputs that will accurately measure and produce a school's ability to provide the experiences that support student achievement. Even the best prepared teachers working in environments rich in resources can have low expectations for students which directly affect OTL. Our indicators must be sophisticated and strategic enough to capture this level of subtle reality but not so onerous, numerous, or trivial that they become separated from the original intent or interfere with real reform.

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As chair of this Group, I found it hard to refrain from encouraging the Group to take up and negotiate the complex issues surrounding opportunity-to-learn standards. We opted not to do so. Our restraint was due neither to a reluctance to tackle hard questions or the reality that the Goals Panel had not charged us to address this issue. Rather, it was the timing of our efforts (between May and October 1993) and the political sensitivity of legislation simultaneously being considered that lead me to think NESIC would be better served by taking up this complex issue when the terms of the legislation were settled. Nonetheless, the Group was not completely silent on the topic. Throughout the paper we urge the groups developing content standards, when appropriate, to indicate the resources and supports they judge to be needed to reach the standards they propose.

Defining opportunity-to-learn standards well is technically very difficult. The things that are obvious are probably wrong. Ultimately, OTL standards are empirical. The purpose of content and performance standards is not to tell students and schools one more time what they have not achieved. The purpose is to encourage the system to configure itself to meet standards. Meeting standards will occur when local communities debate their meaning and collectively decide their own resources and course of action to meet them. These debates and decisions are essential -- and necessarily local in character. They must be tuned to local problems and leverage local commitment and resources. I hope my comments and those of David Hornbeck help NESIC frame this important issue wisely, in ways that avoid the pitfalls which have derailed so many previous well-intentioned efforts.

APPENDIX A

BIOGRAPHIC SKETCHES OF MEMBERS OF THE TECHNICAL PLANNING GROUP

Biographic Sketches

Members of the Goals 3 and 4 Standards Review Technical Planning Group

MEMBERS: *• Shirley M. Malcom, chair; Iris Carl; Tom Crawford; Mihaly Csikszentmihalyi; Phil Daro; Chester E. Finn; Anne Heald; David Hornbeck; David T. Kearns; Richard P. Mills; Harold J. Noah; Claire L. Pelton; James J. Renier; Sidney W. Smith; and James Wilsford*

IRIS CARL was President of the National Council of Teachers of Mathematics (NCTM) while they developed the standards other disciplines are now seeking to parallel. She was a member of both the NCTM Commission on Standards for School Mathematics and the National Council on Education Standards and Testing (NCEST). She has served as Vice Chairperson of the Mathematical Sciences Education Board (MSEB) and a director of the National Board for Professional Teaching Standards. She has been a teacher (K through graduate school), an elementary school principal, and director of mathematics for the Houston Independent School District.

TOM CRAWFORD is Director of Coaching and Educational Programs for the United States Olympic Committee (USOC). He has extensive experience advising and counseling amateur and professional athletes and coaches. He has a doctorate in Physical Education from Indiana University, where he co-founded the Youth Sport, Fitness, and Health Clinic of Reilly Hospital for Children at the university medical center. He served on the faculty of both the psychology and physical education departments and coached tennis at Indiana and Purdue universities. He is senior editor for Olympic Coach and a reviewer for other sports journals.

MIHALY CSIKSZENTMIHALYI, a refugee from communist Hungary, began a classical secondary education (in Latin and Greek) in Italy. He subsequently transferred to and dropped out of a vocational secondary school before moving to the United States and completing his higher education at the University of Chicago. He recently served as chairman of the department of psychology and is now Professor of Human Development and Education at Chicago. He has written over 140 articles and 10 books, the latest of which, Flow: The Psychology of Optimal Experience (1990), has been translated into Japanese, German, and 6 other languages.

PHIL DARO is currently Director of Mathematics for the New Standards Project and Executive Director for the California Mathematics Project. The New Standards Project is designing a national assessment system benchmarked to international standards for use by partner states (including California) and districts. He is a member of the Mathematical Sciences Education Board (both Assessment and Executive Committees) and the Technical Advisory Committee for the California Learning Assessment System. He formerly taught high school mathematics.

CHESTER E. FINN is a founding partner and senior scholar with the Edison Project of Whittle Schools and director of their Washington office. He now is a member of the National Assessment Governing Board and Senior Fellow of the Hudson Institute. He has served as Assistant Secretary of OERI and Counselor to the Secretary of the U.S. Department of Education (1985-88), a member of the National Council on Education Standards and Testing, and an advisor to 3 U.S. Presidents and several Governors. He has written or edited 8 books, the latest Education Reform in the '90's. and more than 150 articles.

ANNE HEALD is Executive Director of the University of Maryland's Center for Learning and Competitiveness, an organization dedicated to improving the competitiveness of U.S. workers by identifying and applying relevant lessons from abroad in workforce development, and currently focused on the school-to-work transition process in the U.S. For ten years, Heald directed an international exchange program focused on employment and economic development issues at the German Marshall Fund of the U.S. Once a teacher, she is an acknowledged expert on the transfer of international "best practice" in youth apprenticeships and skills training.

DAVID HORNBECK is co-director of the National Alliance for Restructuring Education and senior advisor to the National Center on Education and the Economy, the Business Roundtable and other private sector, non-profit and government institutions interested in significantly restructuring education. He served as a primary architect of Kentucky's sweeping 1990 reform legislation. Until recently, Hornbeck was a partner in the Washington, D.C. law firm of Hogan & Harston working with the firm's large education law practice. From 1976 to 1988 he was Maryland State Superintendent of Instruction.

DAVID T. KEARNS was CEO of Xerox Corporation from 1982 until 1990. From 1991 until 1993 he was Deputy Secretary of the U.S. Department of Education. Prior to joining Xerox, Kearns was a vice president in the Data Processing Division of IBM. He formerly served as chairman of the boards of the National Urban League, Junior Achievement, and the University of Rochester. He is now a member of the boards of The Chase Manhattan Bank, Time Warner, Inc., Ryder System, Inc., the University of Rochester, and the Ford Foundation. He co-authored Winning the Brain Race, a plan to make American schools competitive, and Prophets in the Dark, how Xerox reinvented itself and beat back the Japanese.

SHIRLEY M. MALCOM heads the Directorate for Education and Human Resources at the American Association for the Advancement of Science (AAAS). After working at the National Science Foundation and teaching biology at the university and high school levels, she is currently a board member at the National Center on Education and the Economy, its New Standards Project, and other organizations. She co-chairs a task force on women in biomedical research at NIH and chaired a task group looking at the school to work transition for the Clinton-Gore transition team.

RICHARD P. MILLS has been Vermont's Commissioner of Education since 1988, where he has encouraged education goals, a common core of learning, a student performance assessment based on portfolios, and a Professional Standards Boards with a majority of teachers. He currently serves on the boards of the National Center for Education and the Economy, New Standards Project, and the National Assessment Governing Board. From 1984-88 he served as (NJ) Governor Thomas Kean's education advisor, directing the Governor's education work, following nine years with the New Jersey Department of Education.

HAROLD J. NOAH, British born and educated, is Gardner Cowles Professor Emeritus, Institute of Philosophy and Politics of Education, Teachers College, Columbia University, where he was dean of the faculty. He has worked in the economics of education and in comparative education. His latest publication is Secondary School Examinations: International Perspectives on Politics and Practice (Yale University Press, 1993). His current research focusses on the changes occurring in examinations and qualifications in Europe as EC labor markets become more closely integrated.

CLAIRE L. PELTON is vice chair of the National Board for Professional Teaching Standards, and twice "teacher of the year," and is director of educational services/ombudsman for the San Jose (CA) Unified School District. She has served as a mentor teacher, on several state (CAP) and national (SAT) test development committees, and on the California State Board of Education committee on the collegiate accreditation of teacher education programs. She wrote the chapter "Education Reform: A Teacher Responds" for a text (Challenges to the Humanities) on school reform.

JAMES J. RENIER is chairman and CEO of Honeywell, Inc., and serves as a board member of several Minneapolis/St. Paul companies. He has a doctorate in physical chemistry and serves on the Board of overseers for the University of Minnesota Carlson School of Management. He is a board member of the New American Schools Corporation, the Minnesota Business Partnership, the Committee for Economic Development, the Institute of Educational Leadership, and the National Commission on Children.

SIDNEY W. SMITH is director of the ATLAS school reform project, funded by the New American Schools Development Corporation. He works with Ted Sizer's Coalition of Essential Schools, Howard Gardner's Project Zero, James Comer's School Development Program, and the Education Development Center. He was formerly headmaster of Boston's English High School, director of alternative education for the Boston Public Schools, and taught at the middle and high school levels. He is a coauthor of a recently published book on performance assessment, Graduation by Exhibition, distributed by ASCD.

JAMES WILSFORD is Executive Director of the South Carolina Business Education Subcommittee of the Education Improvement Act, and an advisor for Goal 1 (early childhood) for the Goals Panel. He has been an English teacher, principal, associate superintendent in Savannah (GA) and superintendent in Orangeburg (SC). Under his leadership, Orangeburg School District Five rose to national prominence for its reform and restructuring efforts, results with at-risk students, parent and business involvement, and the use of technology. He was selected National Superintendent of the Year.

APPENDIX B

NATIONAL CONTENT STANDARDS DEVELOPMENT PROJECTS

NATIONAL CONTENT STANDARD DEVELOPMENT PROJECTS

Arts

Music Educators National Conference
1806 Robert Fulton Drive
Reston, VA 22091

John Mahlmann, Standards Project Director

In coordination with the American Alliance for Theater and Education, the National Art Education Association, and the National Dance Association.

The standards are scheduled to be completed Summer 1994.
For copies of draft standards, other available material or information about opportunities to comment on the standards, contact: Megan Prosser at (703) 860-4000 or FAX (703) 860-4826.

Citizenship and Civics

Center of Civic Education
5146 Douglas Fir Road
Calabasas, CA 91302-1467

Charles Quigley, Standards Project Director
Margaret Branson, Co-Director

The standards are scheduled to be completed Fall 1994.
For copies of draft standards, other available material or information about opportunities to comment on the standards, contact: Margaret Branson at (818) 591-9321, FAX (818) 591-9330 or Mark Molly at (202) 265-0529 or FAX (202) 265-0710.

English, Language Arts

The Center for the Study of Reading
174 Children's Research Center
51 Gerty Drive
Champaign, IL 61820

In coordination with The National Council of Teachers of English (NCTE) and the International Reading Association (IRA).

Allen Farstrup, Standards Project Director for IRA
Miles Myers, Standards Project Director for NCTE
P. David Pearson, Standards Project Director for The Center

The standards are scheduled to be completed Fall 1995.
For copies of draft standards, other available material or information about opportunities to comment on the standards, contact: Jean Osborn at (217) 333-2552 or FAX (217) 244-4501.

Foreign Languages

American Council on the Teaching of Foreign Languages, Inc.
6 Executive Plaza
Yonkers, NY 10701-6801

In coordination with the American Association of Teachers of French, the American Association of Teachers of German, and the American Association of Teachers of Spanish and Portuguese.

June K. Phillips, Standards Project Director

The standards are scheduled to be completed Spring 1996.
For copies of draft standards, other available material or information about opportunities to comment on the standards, contact: Jamie Draper at (914) 963-8830 or FAX (914) 963-1275.

Geography

National Council of Geographic Education
Geography Standards Project
1600 M Street, NW – Suite 2611
Washington, DC 20036

In coordination with the Association of American Geographers, the National Geographic Society, and the American Geographical Society.

Anthony R. DeSouza, Standards Project Director

The standards are scheduled to be completed Fall 1994.
For copies of draft standards, other available material or information about opportunities to comment on the standards, contact: Heather Scofield at (202) 775-7832 or FAX (202) 429-5771.

History

National Center for History in the Schools at UCLA
231 Moore Hall, 405 Hilgard Avenue
Los Angeles, CA 90024

Charlotte Crabtree, Standards Project Co-Director
Gary B. Nash, Standards Project Co-Director

The standards are scheduled to be completed Spring 1994.
For copies of draft standards, other available material or information about opportunities to comment on the standards, contact: Pamela Hamilton at (310) 825-4702 or FAX (310) 825-4723.

Mathematics

The National Council of Teachers of Mathematics
1906 Association Drive
Reston, VA 20091-1593

Thomas Romberg, Chair of the Standards Commission

The standards were completed in March 1989.
For copies of the standards, other available material or information about opportunities to comment on assessment initiatives, contact: Virginia Williams at (703) 620-9840 or FAX (703) 476-2970.

Science

National Academy of Sciences
National Research Council
2101 Constitution Avenue, NW
Washington, DC 20418

In coordination with the American Association for the Advancement of Science, the American Association of Physics Teachers, the American Chemical Society, the Council of State Science Supervisors, the Earth Science Coalition, and the National Association of Biology Teachers.

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The standards are scheduled to be completed Fall 1994.
For copies of draft standards, other available material or information about opportunities to comment on the standards, phone: (202) 334-1399 or FAX (202) 334-3159.

APPENDIX C

SETTING STANDARDS IN OTHER COUNTRIES:
A paper by Harold Noah commissioned for the National Education Goals Panel

Setting Standards in Other Countries

A paper by Harold Noah commissioned for
the National Education Goals Panel

I. How standards are set in other countries

China. Standards are set for the entire country and for all levels of the school system by the State Education Commission (SEDC), Beijing. SEDC does this by issuing teaching programs (detailed curriculum descriptions) for each subject at each grade level of the primary and secondary schools, as well as for the teacher training colleges (normal schools). In addition, the SEDC prescribes the allocation of classroom hours among subjects at each grade level. The SEDC commissions standard textbooks for distribution to the schools. However, some latitude is afforded to the provincial school authorities and to the larger cities to devise supplementary materials to meet specific local needs, especially the need for study material in local languages in the areas inhabited by national minorities.

Secondary education tends to concentrate on preparing students to sit for the National Unified College Entrance Examination (NUCEE). There is a good deal of rhetoric in official publications and in the professional literature about the need to release the schools from the shackles of preparation for the examinations -- especially to emphasize the virtues of "communist morality," "socialist patriotism," and the like. But, since the examinations are highly competitive (only about 1 in 3 candidates will eventually be offered a place in state-run higher education), exam requirements continue to be a powerful standards-setting mechanism.

The SEDC's control of not only the schools' programs and timetables, but also the curricula of the teacher training colleges, means that young teachers enter on their work in the schools with a rather unified set of standards and expectations, reinforcing those that are carried over from their own recent experiences as students.

England/Wales. Until the end of the 1980's, there were no official national content standards. Instead, each of the approximately 160 local education authorities was free to issue its own set of content guidelines. These varied from the quite detailed to the most sketchy, or were even absent altogether. In any event, the heads of individual schools usually assumed that it was their responsibility to determine what should be taught in their schools and how hours should be allocated among the subjects. It was further usually assumed that each teacher (or subject department) would determine which books, other materials, and methods to use. In this sense, one could speak of a very loosely coupled system, in which initiative at the school and classroom level was more important for establishing content standards than any official pronouncements.

However, that was by no means the end of the story. As in China, the influence of end-of-secondary-school examinations (especially, the Certificate of Secondary Education, the General Certificate of Secondary Education, and the General Education Advanced Level Certificate) on the schools' formal curricula and on the practice of teaching and learning was very strong. However, these examinations did not constitute a national system: there were between 7 and 15 separate examination boards providing the examinations, with different syllabuses, different regulations, different test papers, and (it was alleged) different standards of grading. Schools, and even subject departments in schools, signed up with different boards, so the backwash effect of the examinations, although strong, was quite varied across the country.

From time to time, in order to try to influence what the schools were doing and/or what the local education authorities were asking them to do, the Department of Education and Science (DES) would issue surveys of education, or reports on special topics. More rarely, official commissions of inquiry (Royal Commissions) were appointed to investigate, consider, report, and provide recommendations.

In the 1960s, the DES established a national Schools Council to advise on curriculum, standards, and examinations. Local education authorities, teachers, employers, and university professors were joined in so-called "free association." It was emphasized that the Schools Council was not to be a tool of DES. Rather, teachers' representatives were given a majority vote in governance of the Schools Council. Although work went ahead very actively to produce new curricula in all of the major school subjects, their final influence on school practice was small.

By far the most important tool in the hands of the central government for reviewing and perhaps influencing a school's standards was the corps of HMI's (Her Majesty's Inspectors of Schools), whose members would descend pre-announced on a school to observe teachers, to check on facilities, to look at pupils' written work, to form an opinion about the level of operation of the school, and to make recommendations. Their written reports were formidable documents that tended to carry a good deal of weight. Insofar as the HMI's were in agreement about content standards (which was by no means always the case), they could help to define standards in practice. But the general stance of the central government was to stay out of (even to take pride in staying out of) the standards-setting business.

This "hands-off" approach has been rejected by the recent Conservative administrations. In the mid-1980s the Schools Council was abolished (its recommendations tended to be too radical for the taste of the then minister of education) and two separate bodies were set up, the Examinations Council and the Curriculum Council. This marked the beginning of a distinctly more pro-active stance by the central government toward standards and assessment. Beginning in 1986, the government embarked on a legislative program designed to locate control of a core portion of the schools' curricula in the central government. The major outlines of the changed approach were embodied in the Education Reform Act of 1988. A National Curriculum was instituted. A School Examinations and Assessment Council (SEAC), appointed by the minister, replaced the two separate councils on examinations and curriculum. One part of SEAC's remit is to certify curricula in the core subjects. For the first time in English educational history, all state schools would be expected to teach to a common set of goals in a prescribed set of subjects. SEAC's second job is to review the syllabuses, regulations, and examination papers of the various GCSE and GCE A-Level examining boards, to suggest changes, and to approve or disapprove. A major goal is to reduce the differences among the boards in the content and grading of their examinations. More revolutionary yet in the English context has been the plan to test all pupils at ages 7, 11, 14, and 16 in the core subjects.

The standards-setting procedures took much longer than was expected. Many of the original proposals in the core subjects ran into stiff opposition from teachers, professional educational associations, and even employers' organizations, and had to be withdrawn for redrafting. By now, however, there is greater acceptance among teachers of the desirability of having a set of national content standards in the major school subjects.

Meanwhile, the attempts to implement nationwide testing, beginning with 7-year-olds, have run into organized opposition from teachers, who complain that the tests take too much time, are poorly constructed, and are in any case often impossible for an unaided teacher to administer properly. In June/July, at the close of the 1993 school year, the teachers unions announced a boycott of the tests, and most teachers refused to administer them. The minister was left vowing to persist in imposing the testing (though quite how he would do it if the teachers would not cooperate was by no means clear), and to uttering threats about withholding pay from those teachers who continued their boycott.

Observers have noted a certain irony in that while Mrs. Thatcher's announced policy was to shrink the role of the state in British life in general, practice has gone the other way in schooling, as government has limited the educational powers of the local authorities and has inserted the ministry (now renamed "Department *for* Education") squarely into the business of setting and assessing standards.

France. The French school system has experienced a series of major restructuring and expansions in the past 30 years. Secondary education has been particularly affected, by opening up what had been a rather circumscribed system to all children of secondary school age. Between the primary school and the upper secondary school (*lycée*) an intermediate 3-year *collège* has been introduced. The *lycée* system has been vastly expanded and differentiated, providing many different types of institutions and internal tracks. Primary education has been less touched by restructuring.

Throughout all these changes, the administrative structure of the system, particularly its highly centralized and bureaucratic nature, has remained a constant, despite the fact that recent years have seen some movement toward devolution of administrative authority, and especially responsibility for finance, to the *départements* (roughly, counties) and municipalities. In line with the centralizing traditions of the educational system, curricula and content standards are established under the control of the ministry of education by national subject commissions, which contain members from the universities and employers' groups, but with a predominant voice going to the ministry's own inspectors general.

Curricula and standards are published in great detail by the ministry and it is expected that they will be followed closely in all French schools, with only minor regional variation. A large corps of inspectors sees to it that schools and teachers follow the prescribed programs. Standards tend to be high, in the sense that not only is the quantity of material to be covered quite large, but there is a good deal of relatively difficult material, too -- especially in the upper secondary grades. Students are expected to master extensive bodies of knowledge and to exhibit their knowledge, understanding, and skills in formal ways. For example, French schooling emphasizes that there is a "correct" way of writing an essay, critiquing a proposition in philosophy, or presenting a solution to a problem in mathematics. Teachers insist that students master these techniques; individual, innovative style is not likely to be rewarded.

At the end of each year, teachers review the work of the students together with the results of end-of-year examinations, to decide whether a student is to be promoted to the next grade, or be required to repeat the grade. Répétition is not unusual: for example, over the course of primary schooling about 30 percent of the students can expect to repeat at least one year. In secondary school the rates are much lower, between 8 and 15 percent, depending on the type of school and track, but failure to gain promotion sends a very clear signal about standards to student and family.

After the first cycle of secondary education (the 3-year collège), the student passes to the second cycle, which has two streams, one "long," the other "short." The long stream enrolls approximately half the age group. It normally takes three years (though about half the students take an extra year) and leads to the baccalauréat at age 18 or 19. The short stream lasts two years, concentrates on technical studies, and leads to the Certificat d'Aptitude Professionelle (Vocational Certificate).

The baccalauréat is exceptionally important in practice in establishing the standards of French education. The pass rate is usually about 66 percent of candidates, or 33 percent of the age group. Passing the bac opens the door to a tuition-free place in a university. Depending on the particular bac track the student has entered, s/he will take written and/or oral examinations in 6-7 subjects. The typical written examination will last 3 to 4 hours, for a total of 20 to 24 hours of written examination. Each year the ministry circulates a list of topics to be addressed in the next exam administration. It sets dates for the examinations and announces procedures for administering them. The ministry formulates the rules for appointing local juries of examiners, and describes their powers, procedures, and the constraints on them. The ministry also specifies the general criteria and technical aspects for evaluating answers and awarding marks (such as weighting scores on particular subjects according to the type of baccalauréat). Limited discretion is given to the regional academic authorities (académies), but the ministry retains ultimate control over the entire process of the baccalauréat examination through its regional pedagogical inspectorate. Members of the inspectorate are subject specialists in each region who work closely with the rector of the académie to appoint members of the juries supervising the examination, to decide the questions to appear on the examination papers, and to determine grading criteria. Thus, even though there is a degree of devolution of administrative authority to the regions, the final power to decide what standards will be upheld by the bac resides in Paris at the ministry. Given that the announced policy of the government is to have 80 percent of the age-group "brought to baccalauréat level" by the year 2000, the role of the ministry in setting standards, via both curriculum and bac regulations, is hard to exaggerate.

France has a further standards-setting mechanism worth mentioning. The state supports a network of higher education institutions known as grandes écoles. Their courses of study, facilities, and faculty - mainly in engineering and public administration - are vastly superior to those found in the universities. Entry is by competitive examination (popularly known as the concours) taken after two years of post-baccalauréat preparation in special classes organized at the lycées or in private, for-profit cramming schools. Groups of grandes écoles set common entrance examinations, incorporating extremely high standards, to select about 10 percent of those going on to higher education. Success in entry and completion of the course at a grande école means preferential access to the best jobs in government and the economy.

The French have acted on the assumption that, alongside the formal statement of standards in regulations and the work of an inspectorate to report on their observance, a series of tough tests and examinations, culminating in the baccalauréat and the concours, provides further assurance that school standards will not only be set at a high level, but will be maintained.

Germany.[1] Each of the original 11 (16 since 1991) Federal provinces (Länder) is guaranteed formal sovereignty in matters of education and culture, like the states of the United States. And, like the states here, they are jealous guardians of that sovereignty. If for no other reason, Germany offers a distinct contrast to the French model, which has relied so heavily on nationwide standardization and control from the center to set and maintain academic standards. Nevertheless, like France, the Federal Republic has also managed to achieve a relatively high and uniform degree of academic quality within the various types of schools and at the various grades levels within those schools, while according a large measure of autonomy to each of the provinces.

After attending a common primary school, students in Germany go on to one of three main types of secondary school: Hauptschule, Realschule, and Gymnasium. Attempts during the 1960s and 1970s to introduce comprehensive secondary schools were mostly unsuccessful. The Hauptschule enrolls about 35 percent of the age-group for a 5-year course of study that is less academically demanding than in the other two types of secondary school. The Realschule enrolls about 30 percent of the age-group in a 6-year course. Its standards lie between those of the

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[1] The discussion of Germany refers to the 15 "original" provinces, and should not be taken to describe the situation in the five new provinces established on the territory of the defunct German Democratic Republic.

Hauptschule and the Gymnasium. The Gymnasium is primarily academic in orientation, and prepares students for the Abitur examinations at the end of 9 years of study.

Each provincial ministry of education issues curriculum guides and timetables of hours of class in great detail for each subject in each of the school types. The guides are usually formulated in consultation with school teachers, university specialists, and educationists. It is expected that teachers will follow the guides closely, and it appears that this does in fact happen without much resort to inspection or other administrative means.

In like manner, regulations governing the award of certificates of completion of the Hauptschule and Realschule courses, as well as the Abitur certificate, are issued by each province. Given this emphasis on regional autonomy in setting standards, how has Germany managed to secure a workable degree of uniformity of standards?

The main instrument has been the Standing Conference of Ministers of Education, which brings together the ministers of all the provinces, taking decisions by consensus. The Standing Conference is a forum for the exchange of information and proposals. It attempts to reduce as far as is practicable the differences in educational arrangements among the provincial systems, to provide a more solid basis for the mutual recognition of credentials by the provinces. The Conference has many achievements to its credit, although negotiations often drag on for years before agreements are reached. They range from getting the provinces to begin and end their school years more or less on the same dates, to ensuring that differences in curricula, timetables, and examination and diploma standards are reduced. Much of this effort is driven by agreement that mutual recognition of credentials is a necessity in the relatively small land area of the Federal Republic.

The Abitur examination has some of the same standards-setting effects in Germany that the baccalauréat has in France; both pull standards in the direction of loading the curriculum not only more heavily with material to be learned, but with more difficult material as well. However, teachers working in individual schools play a more significant role in setting standards for the Abitur than for the baccalauréat, so the academic material to be mastered for the Abitur does not have quite the national currency and impact that the baccalauréat has in France.

Japan. The ministry of education in Tokyo (Mombusho) sets the standards for schooling in much the same way that the Paris ministry does in France -- at least as far as administrative regulation, inspection, and approval of textbooks are concerned. However, there is greater devolution of responsibility from Tokyo to the 47 prefectures (Ken) and municipalities for setting standards and deciding other school matters than from Paris to the académies.

The ministry publishes guidelines, setting out the required courses of study, the curriculum, and credit requirements for each level of the school system. These are to be followed by the prefectures, which have boards of education to run education, especially upper secondary schools, in their districts. In turn, municipalities (which run elementary and lower secondary schools) devise their programs of study and timetables according to the guidelines established at the prefectural level. The guidelines on courses of study issued by Mombusho are quite general; they become progressively more detailed as one moves through the intermediate prefectural and municipal stages of administration down to the level of the individual school.

The ministry is advised by a Curriculum Council, which prepares a set of recommendations on objectives, content, allocation of teaching hours, and the like. These recommendations are then used by subject specialists employed by the ministry, who work with consultants from outside the ministry, to devise the course of study for each school subject and each grade level. Teachers are used as consultants to the Curriculum Council to advise on the content of the teachers' guides which are also produced and circulated by the ministry. Textbooks are commercially developed and produced, but they must be sanctioned by the ministry before they can be used in the schools. Hence, the textbooks adhere closely to the ministry's specifications. Adoption is by the prefectural and municipal education boards, who buy the books for all of their students in compulsory education (i.e., to the end of lower secondary school). No charge is made for these books and they do not have to be returned to the school at year's end.

Many observers have pointed to the relatively relaxed nature of Japanese pre-primary and primary schools, compared with the exam-driven atmosphere in the secondary schools. Because the entrance examinations require the mastery of large quantities of factual material, are so important in determining the students' future prospects in employment, and are so competitive, they are probably more important for understanding how the particular standards currently observed in Japanese education have come about and are maintained.

Standards in the Japanese secondary school system are set in practice by the backwash effect of the entrance examinations -- in this case, from lower to upper secondary school, and from upper secondary school to higher education. "More than any other single event, the university entrance examinations influence the orientation and life of most Japanese high school students, even for the many who do not go on to postsecondary education." (U.S. Department of Education, Japanese Education Today, 1987:44) Transfer from lower to upper secondary school is not automatic; in many prefectures the transfer will be determined by the score achieved in the entrance examinations run either by the prefecture at large or by individual schools. This is a critical point in the student's career. Not only is it the end of compulsory education, but there is a well-recognized hierarchy of quality and prestige among upper secondary schools, both nationally and within prefectures. Getting into the "right" school will influence a student's chances of admission to the "right" university 3 years later. Getting into the "right" university will be critical for future employment and income.

The struggle to enter the "right" school and university (or at least the most prestigious one in sight) explains why such a high proportion of Japanese upper secondary students (about 30 percent) are enrolled in fee-charging private education. The private schools are not necessarily academically superior to the public institutions, but parents hope that their children will get more individual attention. The presence of the university entrance examinations at the end of the three years means that the private schools cannot afford the luxury of having lower standards than their public counterparts.

Japanese parents make great effort to promote their children's academic success. Not only do mothers expect to help with their children's homework, but families are prepared to pay the relatively high costs of enrollment in after-school cramming schools (juku), where the emphasis is not only on the material to be learned, but also on techniques of successful study and test-taking. Reinforcing this family interest and commitment is the widespread belief that academic success is not determined by the child's innate ability (a belief held quite strongly in most other countries, including the U.S.), but by the effort exerted to learn. Hence the view in Japan that, given the willingness to make an effort and to persist, all can reach the high standards demanded.

Summary. Most countries embody their content standards in curriculum guides issued by the ministries of education, or their equivalents. Typically, ministry officials consult with education professionals in the course of establishing curricula and standards. In some countries (for example, Japan) consultation draws on the experience of secondary school teachers; in others (for example, France) members of the schools inspectorate play a large role. We observe a general tendency, however, to move away from consultation strictly with educators, to involve a wider spectrum of interests -- especially employers and parent groups. This has been evident, for example, in England/Wales.

Standards that exist on paper are not necessarily followed at the classroom and school level. In order to increase observance of curriculum guidelines, inspectors of education are appointed to visit schools and classrooms to report on the extent to which the official curriculum is being implemented and on students' and teachers' performance. In addition, many countries require that textbooks used in the schools receive official approval. Ministries of education may commission textbooks embodying the principles and content of the official curriculum, arrange for their publication, distribute them, and require their use in the state schools (for example, China).

A national examination system provides a further mechanism for setting standards, through specification of examination syllabuses and regulations, preparation of tests, grading of answers, and establishment of cutoff points. In most countries these examinations are within the jurisdiction of the ministry of education, but are prepared and administered by subordinate (sometimes semi-independent) authorities. In China, England/Wales, France, Germany, and Japan the examinations have national currency and are high-stakes events for students and schools. Their backwash effect on what actually goes on in classrooms is formidable and reaches far down the grade levels.

Reference to a less tangible, less "institutional," and certainly less malleable factor is in order at this point. Even though the judgment of teachers and school administrators about what levels and kinds of knowledge, skills, and attitudes students should attain will to some extent be formed by the official regulations and requirements, in the final analysis it is the values and expectations internalized by teachers and administrators and expressed in their pedagogical work that are likely to dominate standards-maintenance in practice.

II. Comparing proposed standards with those of other countries

A primary goal of proposed standards is that they should be "world-class," "internationally competitive," and "comparable to the best in the world."

Further, the NEGP proposes that standards documents submitted for review and certification contain a section comparing the proposed standards "with current standards and priorities in other countries. Standards should be high - as challenging as, or more challenging than, others in the world, but not necessarily the same." (Review Criteria for Subject-Specific Standards, August 23, 1993).

In the light of the above summaries of how five important countries go about the business of establishing and maintaining academic standards for their schools, developers of standards may welcome some guidance on how comparisons with other countries' standards might be made, what sources might be used, and what form the comparison might take.

The section "Guidance on Applying the 'World-Class' Criterion" on pages 16-17 of the report is offered as a guide to those working on these comparisons.

iii. Recommendations for the consideration of other TPG members

1. The requirement that those proposing standards should document by comparison the fact that their proposed standards are in fact "world-class," is on the face of it a reasonable one -- as long as it is understood all around that the comparisons can be (should be?) quite limited with regard to number of countries, types of school, and grade levels.

2. Those making the comparisons should be given fairly wide latitude also in selecting which aspects of their proposed standards they wish to focus on: depth, breadth, up-to-dateness, emphasis on theory, apparent utility for future study or work, capacity to interest/motivate students, incorporation of practical or lab work, assessability, etc., etc.

3. Countries that have achieved high standards have done so not merely by the adumbration of curricular guidelines, increases in the hours of study overall or for particular subjects, teacher training and retraining, spending more money, and so forth. Family support is immensely important. Even in those countries that can boast of high standards overall, there is now the familiar concern that children who do not have good support at home are only too likely to be defeated by the challenges that school presents.

4. A tough examination system carrying solid rewards for success seems to be very helpful in setting and maintaining high standards, though not necessarily to the exclusion of the aforementioned policy instruments.

5. Certainly, in the United States we do ourselves immense harm when we insist on testing children frequently for "aptitude" and "ability," using the results to label, classify, and track them. The results are predictable, and the contrast with Japan, where effort not "ability" is seen as the prime mover of achievement, is startling. Good standards will help elicit high levels of effort by learners, not just high levels of measured achievement by the "able."

6. In the end, teachers are the purveyors of standards. Whatever is written on paper will remain on paper unless teachers incorporate the standards into their values, teaching, and behavior. After standards are certified and adopted by this or that state or school district -- then comes the hard part.

7. The standards and standards setting procedures reviewed in Part I of this report did not appear overnight. Instead they have been the outcome of many decades of development, in some instances a century or more. In this business of standards-setting in schooling it is imperative to take the long view. Success, whatever that may be, is unlikely to come quickly; techniques and mechanisms for establishing standards will not be perfected rapidly or to everyone's satisfaction; and by no means all states will be (or will need to be) attracted to adopt certified standards immediately, or even after two or three decades. The notion of national standards for schooling does not sit comfortably with the American preference for local control. However, it may be becoming more acceptable, and one can take encouragement from recent experience in England/ Wales. There, too, national "approved" standards for the schools were regarded as somehow alien -- even "Continental," but opinion in the last year or two has swung around to substantial approval. The same may well happen here, especially if the standards are seen to be reasonable and attainable, technically sound, and not imposed, but available for voluntary adoption.

APPENDIX D

EXECUTIVE SUMMARY OF *RAISING STANDARDS FOR AMERICAN EDUCATION*, Report of the National Council on Education Standards and Testing

Executive Summary

Raising Standards For American Education

Report of the National Council on Education Standards and Testing

The National Council on Education Standards and Testing was created in response to interest in national standards and assessment by the Nation's Governors, the Administration, and Congress. In the authorizing legislation (Public Law 102-62), Congress charged the Council to:

- advise on the desirability and feasibility of national standards and tests, and
- recommend long-term policies, structures, and the mechanisms for setting voluntary education standards and planning an appropriate system of tests.

The work of the Council follows and complements the President's Education Summit with the Governors held in 1989. This important collaborative effort led to the adoption of six National Education Goals designed to engage all Americans, from young children to adults. The National Education Goals Panel was created to report annually on progress toward the Goals. In its first year, the Panel concluded that to meaningfully measure progress on Goals 3 and 4, consideration should be given to creating national education standards that define what students should know and be able to do and to identifying and developing methods to assess students' success in meeting them. The President similarly has called for the creation of World Class Standards for students and high-quality tests on which they can demonstrate achievement of these standards. In carrying out its charge to examine a broad range of issues, the Council met eight times between June and December, 1991. Task forces were created and produced background papers that informed the Council's discussions. In response to the congressional call for broad public participation, the Council solicited and received public comment from experts and organizations representing a wide range of constituents and interests. This report to Congress, the Secretary of Education, the National Education Goals Panel, and the American people provides recommendations reached after intense deliberation and includes concerns that must be addressed as work progresses on developing standards and assessments.

Desirability of High National Standards and a System of Assessments

In the course of its research and discussions, the Council concluded that high national standards tied to assessments are desirable. In the absence of well-defined and demanding standards, education in the United States has gravitated toward *de facto* national minimum expectations. Except for students who are planning to attend selective four-year colleges, current education standards focus on low-level reading and arithmetic skills and on small amounts of factual material in other content areas. Consumers of education in this country have settled for far less than they should and for far less than do their counterparts in other developed nations.

High national standards tied to assessments can create high expectations for all students and help to better target resources. They are critical to the Nation in three primary ways: to promote educational equity, to preserve democracy and enhance the civic culture, and to improve economic competitiveness. Further, national education standards would help to provide an increasingly diverse and mobile population with shared values and knowledge.

The Council recommends standards for students and standards for schools and school systems. Student standards include specification of the content — what students should know and be able to do — and the level of performance that students are expected to attain — how good is enough. The Council envisions that the national standards will include substantive content together with complex problem-solving and higher order thinking skills.

To ensure that students do not bear the sole burden of attaining the standards and to encourage assurances that the tools for success will be available at all schools, the Council also recommends that states establish school delivery standards. System performance standards should also be established. School delivery and system performance standards would attest to the provision of opportunities to learn and of appropriate instructional conditions to enable all children to reach high standards.

In endorsing the concept of national standards for all students, the Council stipulates several characteristics these standards should have:

- Standards must reflect high expectations, not expectations of minimal competency.
- Standards must provide focus and direction, not become a national curriculum.
- Standards must be national, not federal.
- Standards must be voluntary, not mandated by the federal government.
- Standards must be dynamic, not static.

The Council's intent in recommending the establishment of national standards is to raise the ceiling for students who are currently above average and to lift the floor for those who now experience the least success in school, including those with special needs. States should work toward reducing gaps in students' opportunities to learn and in their performance, such as those now associated with race, income, gender, and geographical location.

Having reached consensus that standards are desirable, the Council then determined that it is not sufficient just to set standards. Since tests tend to influence what is taught, assessments should be developed that embody the new high standards. The considerable resources and effort the Nation expends on the current patchwork of tests should be redirected toward the development of a new system of assessments. Assessments should be state-of-the-art, building on the best tests available and incorporating new methods. In order to measure individual student progress and to monitor achievement in attaining the National Education Goals, the new system of assessments should have two components —

- individual student assessments, and
- large-scale sample assessments, such as the National Assessment of Educational Progress.

The key features of both components would be alignment with high national standards in the capacity to produce useful, comparable results. In addition, the system of assessments should have a number of other features.

- The system of assessments must consist of multiple methods of measuring progress, not a single test.
- The system of assessments must be voluntary, not mandatory.
- The system of assessments must be developmental, not static.

As these features are put in place, technical and equity issues need to be resolved, and the overriding importance of ensuring fairness for all children needs to be addressed. Resolving issues of validity, reliability, and fairness is critical to the success of the new system.

The Council concludes that the United States with appropriate safeguards, should initiate the development of a voluntary system of assessments linked to high national standards. These assessments should be created as expeditiously as possible by a wide array of developers and be made available for adoption by states and localities. The Council finds that the assessments eventually could be used for such high-stakes purposes for students as high school graduation, college admission, continuing education, and certification for employment. Assessments could also be used by states and localities as the basis for system accountability.

In the Council's view, it is desirable that national content and performance standards and assessments of the standards be established. Doing so will constitute an essential next step to help the country achieve the National Education Goals. Moreover, developing standards and assessments at the national level can contribute to educational renewal in several ways. This effort has the potential to raise learning expectations at all levels of education, better target human and fiscal resources for educational improvement, and help meet the needs of an increasingly mobile population. Finally, standards and assessments linked to the standards can become the cornerstone of the fundamental, systemic reform necessary to improve schools.

Feasibility of Creating National Standards and a System of Assessments

As a first step, the Council recommends that standards be developed in the five core subject areas set out in the National Education Goals — English, mathematics, science, history, and geography — with other subjects to follow. The feasibility of setting national standards and their effectiveness in prompting state and local reform and experimentation is demonstrated by the work of several national professional organizations, a number of states, and other countries. The experiences of the National Council of Teachers of Mathematics (NCTM) and of several states demonstrate that standards-setting is feasible — it is being done. Slowly but surely across the country, states and local districts are responding to the NCTM standards by changing the curriculum and style of teaching to reflect the challenging new standards. The Council recommends national support for such efforts and encourages the work by professional organizations, states and localities in articulating standards, curriculum frameworks, and instructional guidelines.

To make national standards meaningful, it is important that the Nation be able to measure progress toward them. New forms of assessments — tests worth teaching to — are envisioned. A system of student assessments linked to world-class standards would provide information that could be used to:

- exemplify for students, parents, and teachers the kinds and levels of achievement expected;
- improve classroom instruction and learning outcomes for all students;
- inform students, parents, and teachers about student progress;
- measure and hold students, schools, school districts, states, and the Nation accountable for educational performance; and
- assist education policymakers with programmatic decisions.

It is unlikely that all of these purposes could be accomplished with the same assessment. Requirements for validity, reliability, and fairness necessitate on-going, independent reviews of the assessments and their uses. Further, particularly for children who have historically experienced less success in schools, such as the poor, ethnic minorities, and students with disabilities, schools should ensure the opportunity to learn as a critical condition for valid and fair use of assessment results.

Some existing assessments may be retained, while others will need to be replaced to avoid adding to the current patchwork. Promising efforts are under way nationally, as well as by states, localities, research institutions, and test publishers using new assessment methods to measure student progress against more demanding curriculum content. Investing in a national system of assessments could lead to more effective and economical use of available resources since it would provide direction and focus to reform efforts. The Council urges support for necessary research and development so that the critical need for assessing students against the yardstick of national, world-class standards can be met.

The Council notes that if they are to be useful, comparable results should be available to all key levels, including individual students and their parents, schools, districts, states, and the Nation. Assessment outcomes tied to the standards should be widely distributed and communicated in a form that is readily comprehensible to students, parents, policymakers, and the public. States and localities should report results in the context of relevant information on the conditions of learning and students' opportunities to learn.

Developing and Implementing National Standards and a System of Assessments

To ensure that development of national standards and a voluntary system of assessments is done effectively, a coordinating structure needs to be agreed upon and put into place. This structure should benefit from and not duplicate work already being done by existing entities. The Council recommends that a reconfigured National Education Goals Panel and a newly created National Education Standards and Assessments Council work jointly to certify content and student performance standards and criteria for assessments as world class. The Council further recommends that to ensure strong public accountability in this work the Panel would appoint members of the National Education Standards and Assessments Council, which would have the responsibility to coordinate this national effort.

High national standards and a system of assessments, while critically important, are not panaceas for the Nation's educational problems. Other required elements of reform include state curriculum frameworks tied to the standards, professional development opportunities for teaching to the standards, new roles and responsibilities for educators, technology that enhances instructional opportunities, assistance to families and communities in need, incentives to inspire better efforts by students and educators, early intervention where problems are identified, and the reduction of health and social barriers to learning.

Conclusion

The country is engaged in a national debate on what students should know and be able to do and on how to measure achievement toward those ends. This debate is part of a fundamental shift of perspective among educators, policymakers, and the public from examining inputs and elements of the educational process to examining outcomes and results. The Council initially discussed standards and assessments as a way to help measure progress toward the National Education Goals but came to see the movement toward high standards as a means to help achieve the Goals.

While mindful of the technical and political challenges, the Council concludes that national standards and a system of assessments are desirable and feasible mechanisms for raising expectations, revitalizing instruction, and rejuvenating educational reform efforts for all American schools and students. Thus, the National Council on Education Standards and Testing endorses the adoption of high national standards and the development of a system of assessments to measure progress toward those standards.

APPENDIX E

SETTING STANDARDS: BECOMING THE BEST

Chapter from Volume I of the 1993 Goals Report

Setting Standards, Becoming the Best
Chapter from Volume I of the 1993 Goals Report

Americans thrive on challenge. We settled a massive land, created a new form of government, developed into an economic leader, and landed on the moon - all because these were challenges that did not daunt us. In personal performances, too, we admire and reward those who set high standards for themselves and meet the challenge, as superior athletes, or exceptional pianists, or Nobel laureates in science and literature.

Four years ago the nation's Governors and the President challenged the American people again, this time to rebuilding their education system so that it is among the best in world. The six National Education Goals are the framework for this effort.

A scant century following Independence the American public school system had evolved to attempt what no other country had done–to provide universal access to a free education. At the time, the public equated progress through the system with results. A de facto set of measurements documenting student progress emerged, consisting of high school diplomas, course credits, time spent on subjects, ad nationally devised test that assumed certain content had been covered and that such content was important. With diplomas in hand, young people, as well as their parents, employers, or college teachers, believed that they had been prepared adequately for the years ahead.

We now know that this is not true. Our schools are not organized around high standards for our students; at best, we have a minimum curriculum, reinforced by mediocre textbooks and teaching methods. Our low expectations for most students, growing out of the haphazard and disconnected system with which we had become much too comfortable, might have continued to be acceptable were it not for tow very important realizations in the past decade. First, the standards we have in education do not match with the performance needs demanded by citizenship and employment in our society. Second, our minimal and fractured system of standards is significantly below that of countries with which we compete for leadership, economically and politically.

Consider today's demanding marketplace. Will a worker who punches the clock, stays the required amount of time, has only minimum skills, and applies a scant amount of effort be assured a paycheck? In essence, this has been the context of public education–minimal expectations and a guaranteed endorsement.

Now consider the dilemma of a business person dependent upon employees skilled in statistical measurement using new technologies. In the pool of young people the employer can draw from, only 35%, on the average, will have completed three years of a challenging mathematics sequence before leaving high school. Worse, the employer knows neither what knowledge they actually have nor if they can apply it in an advanced workplace. The employer's competitors around the world, however–in Korea, or Canada, or Spain or several other countries–recruit young workers who consistently outperform our students academically.

Business leaders and many policymakers in the United States believe that this situation is intolerable. Initial reforms attempted to be shored up the existing structure–more high school graduation requirements, more seat time, teachers better prepared to teach academic subjects. With the adoption of the National Goals, the conversation has shifted to results–what is our education system accomplishing and how do we become the best? The answers to those questions lead directly to the need for nationwide standards arguably must be set very high. Moreover, in order to be fair, to preserve our pluralistic society, and to protect our democracy, those standards must challenge all students.

The movement to nationwide standards is intended as a powerful lever for changing American education. It represents a new emphasis, one that focuses on quality learning for all children, not merely access for all. High performance is no longer considered an exception; exceptional performance is expected to become the norm.

The scope and nature of efforts to develop nationwide standards unprecedented. For a national consensus to emerge, a host of concerns must be address, and a common vocabulary is essential. Certain questions need clear answers:

What is a Nationwide Education Standard?

Education standards are what all student should know and be able to do with their knowledge. Moreover, they imply that mastery should be at a very high level. Besides being rigorous, such standards must reflect what has been called "a thinking curriculum"- a curriculum that forces students to use their minds well, to solve problems, to think, and to reason. The term "world-class" is often used to describe standards that meet or exceed those of our strongest competitor nations.

Standards refer to both content and performance. Content standards describe the areas of knowledge all students should have access to if they are to become the productive and fully educated citizens of tomorrow. The Content standards should be challenging and focused, reflecting the most important ideas and skills needed. Although they are currently being developed separately in different academic subject areas (mathematics, history, the arts, etc.), content standards should ultimately enhance efforts to link specific ideas and skills from different subjects together in meaningful and useful ways.

But exposure to knowledge alone does not guarantee learning at high levels. We also need to have assurance that students have more than just a cursory knowledge of content, and that is the role of performance standards. Basically, performance standards should demonstrate how good is good enough. Performance is usually evaluated in terms of successive levels of mastery. Writing out the answers to simple questions about a passage from literature might be considered a novice level. Elaborating on the meaning of the passage might indicate a higher level of learning. Comparing the passage to another source and analyzing the differences might be even still higher. The essential point is that students must show how well they have learned the content. Nationally, we will need to know what percentages of students are reaching what levels of performance on content so that the public will know how the education system is performing.

By having such standards, we turn the traditional mode of schooling around. In the past, how students were taught was mostly fixed, and the results varied- some students failed, most learned at least some of what they were taught. To enable all students to learn at high levels, varied instructional strategies are needed to challenge them. The standards are fixed, but the means of reaching them are varied.

The standards being discussed and developed are unconventional for American schools today because they reflect deliberately higher achievement. However, they are also realistic. In truth, we just have not asked as much of students and schools in the past as they are capable of performing. For example, only one of 11 eighth graders understands measurement or geometry concepts, compared to tow of five students in Korea. Only one of 15 American high school seniors can solve problems involving Algebra, and fewer than five percent can interpret historical information and ideas, not because they cannot do these things but because so few are exposed to high content instruction.

Get Specific. What are Some Examples of What All Students Should Know and Be Able To Do?

Suppose we are watching a fourth grader use numbers. In a typical mathematics classroom today, this probably means simple arithmetic, adding and averaging similar columns of figures-dull stuff. However, our students has been learning mathematics since kindergarten under the standards developed by the National Council of Teachers of Mathematics. So, she knows how to analyze sets of data, draw a line plot, and decide on an analytic approach. She takes tow sets of data collected on samples of bears-grizzlies and black bears. She analyzes their sex and their weight and plots the results of her work on a graph. Is she skilled in arithmetic? Certainly! Can she apply her knowledge, and is she eager to do so? You bet! Is she bored or intimidated by math? No! Is she up to high standards work? Yes!

In a middle-grades science classroom, we might watch a small group of students learn about the common properties of matter, such as the particle model, and the fact that a total mass of materials involved in any observed change remains the same. They have an ice cube in a jar and a record what changed and did not changes as the ice melted-color, wetness, temperature, mass, shape, volume and size. They work to identify one factor they regard as critical to the melting process and express it as a question, which they proceed to and express it as a question, which they proceed to investigate. They then draw conclusions and share and discuss them with the whole class. These students have used the scientific method, solved problems as a group, analyzed data, expressed their findings in writing, and defended their analysis in discussion. Regrettably, only about one-fourth of eighth graders in a typical science calls in the present system regularly write up science experiments, according to the National Assessment of Education Progress.

Now we are look over the shoulders of graduation seniors taking a more conventional test in American history, but at an advanced level. They have three house to answer four questions which they may select from several categories. Let's pick the general category. One of the questions asked students to analyze whether government regulations did more harm than good to the American economy between 1880-1920. Another has them explain why evangelical protestantism has been an important force in American life and what effects it had in the period 1800-1880 or 1900-1960.

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Another asks them to offer evidence for the existence and influence of a "military-industrial complex" in the conduct of American foreign policy from 1954-1974.

These questions, taken from an actual test in England, illustrate the level and depth that other countries expect their students to know. The challenge to these students does not stop at mastering historical facts. They must also integrate this knowledge far beyond traditional rote memorization.

Content and performance standards set high expectations for children. They also challenge educators and parents to become effective teachers. And they set all of us on a path toward becoming active, lifelong learners.

How Are Nationwide Standards Being Set?

Three principles guide what is happening in setting high nationwide content standards.

One is that their use is entirely voluntary. The standards are not a centrally imposed national curriculum, but rather a resource to help schools, districts, and states anchor their curriculum, instruction, assessment, and teacher preparation efforts. They are reference points for public understanding, providing a common focal point for school people, parents, and other interested citizens to agree on what is important and to work together to improve education results for all.

A second element is that nationwide standards are not fixed forever. They are intended to be continually discussed and improved. The development and distribution of the initial content and performance standards in a subject should only be the beginning.

The third important element is the truly inclusive process that is being used to reach a consensus on nationwide standards. Every possible interest is involved. At the core are the real experts-master teachers of history, civics, geography, sciences, English and language arts, foreign languages, and the arts. Their partners are researchers and academic experts. A lengthy process of feedback and revising follows the initial development. This is the process used by the National Council of Teachers of Mathematics (NCTM) is developing the standards it announced four years ago. The process has become a model for other subject areas.

Separate but related individual projects focus on content standards or address particular aspects of higher performance. For example, more than one-half of the nation's students are in states or school districts involved with the New Standards Project, a foundation-funded effort to arrive at high standards through assessments which rely on students' abilities to reason and solve real-world problems. The 300 schools in the Coalition of Essential Schools are developing a core of leaning and new ways for students to display what they have learned.

Many state-instigated efforts are changing the education of students from one based on time spent in class to on based on challenging content. Maine's Common Core of Learning, New Mexico's Standards for Excellence, Michigan's Partnership for New Education, and the curriculum frameworks developed in California are examples of where research and best practice knowledge are coming together to stimulate higher levels of learning.

Some argue that those closet to students, the teachers, are those most capable of making content decisions for their classrooms. On the other hand, some believe that a uniform national curriculum is the only way to ensure progress. In a uniquely American way, we have opted for a balanced approach, with local classroom decisions guided by a common core framework that reflects a nationwide consensus about what is most important for students to learn.

We do not want to be stifled by a national curriculum. Nor do we want a hit-or-miss education system. We want everyone to be working from their own unique context toward the common goal of providing challenging content for all students.

If All of These Efforts Are Already Taking Place, What is There Left To Do?

Despite the many efforts under way to set new standards, most students in this country are still taught unchallenging curriculum and are still not aware of what they should be aiming for in there studies. In addition, parents, teachers, and broader general public remain largely ignorant about what they should expect students to know and do as a result of their education. Without a process to reinforce and build on the power of high expectations in the public's mind, even what has been accomplished so far might prove to be short-lived.

All of the individual efforts under way to develop high-quality content and performance standards need to become part of a nationwide commitment by all citizens to hold all students to high standards. These in turn can become the foundation for locally determined changes in assessment, teacher preparation, curriculum, classroom organization, and other policies and practices that must occur for the standards to be met. Ultimately, it is only by local communities adopting standards-based systemic approaches to reform that we can obtain the fundamental changes in our schools necessary for achieving the National Education Goals.

At the moment, the prospects are unprecedented for renewing public education through the country. The public demand, the professional commitment, the research knowledge available about how children learn best, and the growing recognition of the interrelatedness of this country's human investment with what is happening around the world provide excellent conditions for change. We must building on these possibilities.

How Can We Assure That All Students Have Equal Opportunities to Meet The New Standards?

American society is morally committed to equal opportunity. For too many students, disastrously low expectations compound disparities in the quality of schools. These students face a dim future. Taxpayers and voters, however, are unlikely to increase resource for schools without a conviction that dramatic improvements in learning will result. High standards for all is a way to say that we will refuse to settle for low levels of learning for any student.

The experiences of the many initiatives under way to create that high quality are almost unanimous about one important result. The process of being included in the development of high standards and of good assessment systems linked with the content becomes a process of renewal for teachers and administrators. With new skills, heightened awareness of what challenging content is, and experiences of seeing how changes in students, their expectations rise -for all students. Positive attitudes by students and families toward higher standards are vital, too, but they go in tandem with changes in classroom practice.

Certainly, assuring equal opportunities depends on a number of additional factors. Having a nationwide consensus on high standards, however, is essential if we are to end the invidious consequence of our president system-one set of standards for the advantages, another for the disadvantaged.

What Are The Next Steps?

By the end of 1994, most of the projects working on academic standards will have completed at least a first draft of their recommendations.

The National Education Goals Panel and proposed National Education Standards and Improvement Council will work together to assure quality and to certify the results of the standards-setting process, with the former focus on overall policy and the latter providing technical expertise. The Goals Panel already has appointed a Standards Review Technical Planning Group to recommend criteria to be used to review and certify the upcoming voluntary nationwide content standards.

These steps are the first part of the systematic reform process envisioned by the National Goals. They say, in effect, that the nation is committed to the long-haul process of building a world-class education system.

Conclusion

All students will have opportunities to learn at higher levels when American society acts on its belief that he result is important now and in the future, it is fair, and it is possible.

High standards are the very heart of education reform in this country. They are reference points to be used by states and localities nationwide in developing renewed education systems that will be high-performing, equitable for all, and accountable. Think what reforms would look like without standards, without an agreement on what we expect from our students, and without a commitment that all students will be challenged to work with stimulating content, think critically about it, or use it in meaningful ways. The search for high standards already has invigorated the teaching profession, brought researchers and practitioners together in thoughtful ways, and begun to fashion education policymaking into a more effective role.

In essence, the emerging consensus on standards will drive systemic education reform. New nationwide standards will finally allow us as a people to agree on where we want to be. Standards also will allow American education to begin to meet the challenge set four years ago and move it toward its potential and toward the result American society wants for all its children.